

&lt;400&gt; 5155

ccaaagtcca gaagttacgc gtcacccttg ctctacagcc aaacatgcag gactctagta  
60  
acccgcgaaa tgatgggata gcgttgcaaa tccttaaaag agtcctaacg aaatcctggc  
120  
tgacattgac ttctccactg caaccatcga gttcattgtc tcctaaacct tgccatggag  
180  
gcctgtggca cctgagccag ccattatcat caccagcact tccatgagct acaagctgga  
240  
cccactgcag tcctcctgac aactgaaat cagagcctgc acacagagca gcagatgctt  
300  
caatgtaaag gtcatttcca ggtccttgac aggcgtgcat ctgggccaga tccatggcaa  
360  
taaccttcag gttgaggcta gagggcttca gatgggcagc ttcgaatgac aggagcaagg  
420  
aacaagaggc cggaaagggg gggtgacatt ttcagcatct ataagatcaa ctttagaaat  
480  
atgtgggggt tgacaaattc ccatcaagct ctgtggatct tgtacaacta ctcaccaccg  
540  
gcttctcatc agcacatgat tgggtgcaggg ttctgaggat gattttgaga tgttccctga  
600  
tgtggtcttg tgaggagatt tcatgacgga tggcaggaaa cttcgtggag agatttctga  
660  
agacactcct gagctcccaa caccgggcaa ctctcttcca gaggatattg gggtagggg  
720  
tagaagagag gcaaagtcag gtttgtcttc ggatccccct tcattctccc ttttccac  
780  
cgtaaacc aa ctttggttta cagttagaca ccagtttctg gcagatgaaa tccctctgat  
840  
ttcaggcatt ttgtcaatta agctgctcag caacaatagg ataaacttat gaaaagaaag  
900  
gagtagcagt cccacagaca aagcatccag cccctgcact gagacagtat agggaggga  
960  
cttggctctg gcagacagga cagataatca acatcctagt gggccttaca catgtgggca  
1020  
tattcttttc cataccttct tgtctgtttt aacaagctaa cccagtcac agtagcagag  
1080  
agaggggtcca tcctaactta gctgaccagg ctggattcct aatcataaaa ccaaaaaagg  
1140  
aagaacctaa ccatttctct ctttcagcta tgtgttccaa gattactgaa gcaggattct  
1200  
ggccttctctg ataagaacat gaccagatcc agctggtttg caacaagatg aacttcagt  
1260  
ctgagctttc accaagtttt tctcactaca atctcattgt aataactaaa tctccacca  
1320  
agatggagggt tatctgccat tttctgtact ctgctccgtt gtgctgctag agccacaagc  
1380  
ctattaaact ttgcctgaaa ta  
1402

&lt;210&gt; 5156

&lt;211&gt; 118

&lt;212&gt; PRT

<213> Homo sapiens

<400> 5156

```

Met Asp Leu Ala Gln Met His Ala Cys Gln Gly Pro Gly Asn Asp Leu
 1           5           10           15
Tyr Ile Glu Ala Ser Ala Ala Leu Cys Ala Gly Ser Asp Phe Ser Val
      20           25           30
Ser Gly Gly Leu Gln Trp Val Gln Leu Val Ala His Gly Ser Ala Gly
      35           40           45
Asp Asp Asn Gly Trp Leu Arg Cys His Arg Pro Pro Trp Gln Gly Leu
      50           55           60
Gly Asp Asn Glu Leu Asp Gly Cys Ser Gly Glu Val Asn Val Ser Gln
65           70           75           80
Asp Phe Val Lys Thr Leu Leu Arg Ile Cys Asn Ala Ile Pro Ser Phe
      85           90           95
Arg Gly Leu Leu Glu Ser Cys Met Phe Gly Cys Arg Ala Arg Val Thr
      100          105          110
Arg Asn Phe Trp Thr Leu
      115

```

<210> 5157

<211> 1310

<212> DNA

<213> Homo sapiens

<400> 5157

```

tgatcagaaa ttaccttga cgtgcagtga cagttgattt cctcttgaac tgccggtgaa
60
aacagtctag tacacaggtg ctgtcagccc aggggtgggag caggaaatga ttgctgagcc
120
cggggcaggg gaattgcac tgcaggaaag agatgcagca tgctectcac tcctgagtgc
180
ccacctgtcc tgcttctctg caggtgaaaa ctctggggga tgctgatcaa tagagcttgg
240
tcccaagctc tactgggccc ttggaggtag caaggccact gggttgctat cctcttgctg
300
gggatagcaa cactgggtt gcaaccactg gggtgctatc cttttgctat cctcttgctc
360
atgaccagcc atatggtgag gctggggagt tcacatcctc aggcaggaac tagcagttgt
420
ttatccagca atgcctcaag gatgttgcac tgctcccagg agctggctat taggtatgtc
480
ttgtgcggtc agtcagcatc acagacacat agatgctcac cagcctggct tagctgggac
540
ctaaatcttc tgggtgaaaag cttttcacta agtgagggtc cttccctgca aatgctgaat
600
ctagcctaata tcgcaaccac acagaatttc atggctttca aaggcttgcc atgtgccccca
660
tctcattcta tactcacatc ccattggagg gaggattttc acttcttttc tctagacttg
720
gaagctgaga ttcagagagg aagcatccct tgtgcaagat cacatagtca ggagggtgaca
780
cagggtctaa acttgaacca aggtctctaa aggtatttct cttttcagag tctcttcctc
840

```



gtccatttct gtgactaagc tgtgcagagg ttgacagcag ggcaagttat attgatattc  
 900  
 atcctttata ggcttcctgc taaaaagctt ctgagattgt ggtcttccaa aaaaaatagg  
 960  
 agcttggttg aagtccccac attttcaagc actcagtgtt ctgcctctgc gaactgtgct  
 1020  
 aacagctcag tgctgtcctg ggagtcctct gactcagaac cctcgaagca tcctgcattg  
 1080  
 tctttacca ccatcatctt cactaagaga aacatgccta cccatgaagg cgtgtttgat  
 1140  
 tactccaggc ttctggacac acatacccat ggggtgatttt tgctcctcag gcccaatatt  
 1200  
 ctcagacagc ccagcagtgt gaacacacaa tgccaggcca gggaactggg gaccaccatc  
 1260  
 ttgctgatgg gaagggaaca acaggtggcc cagggacatg ctctgcata  
 1310

<210> 5158  
 <211> 82  
 <212> PRT  
 <213> Homo sapiens

<400> 5158  
 Met Thr Ser His Met Val Arg Leu Gly Ser Ser His Pro Gln Ala Gly  
 1 5 10 15  
 Thr Ser Ser Cys Leu Ser Ser Asn Ala Ser Arg Met Leu His Cys Ser  
 20 25 30  
 Gln Glu Leu Ala Ile Arg Tyr Val Leu Cys Gly Gln Ser Ala Ser Gln  
 35 40 45  
 Thr His Arg Cys Ser Pro Ala Trp Leu Ser Trp Asp Leu Asn Leu Leu  
 50 55 60  
 Val Lys Ser Phe Ser Leu Ser Glu Val Pro Ser Leu Gln Met Leu Asn  
 65 70 75 80  
 Leu Ala

<210> 5159  
 <211> 3233  
 <212> DNA  
 <213> Homo sapiens

<400> 5159  
 nnggatccaa taaagtattg agaccaatgt gcaagaaata taattggaaa gcaatgtctt  
 60  
 ccatttcatt agcttttagtt gcatgcagcc atggcacaga gaagggagaa aagaatgtga  
 120  
 gcaaaagtga tcaggaaga tttcctgatg gaggggggag tccaaccggg gtcttcttgg  
 180  
 atagtagcat ttgagtagtg tttaaaaaat aaataaataa aaggagcacg tgagaagtaa  
 240  
 agttgcattt ctggacatga gagcagtgtt gtgaaactta gatgatgcat atagagaagg  
 300  
 cagcgagtgt gtttgaggat agtgagcgaa cagtttgtct gttcacggac atctgtccag  
 360

agtggcaagc acatagtggg taaccagaat gggcctcttc cctttccttt ttggttaccc  
420  
cacaactcag tataggtact gactgcaaaa tctccacatt tgtatatttc ttagcgtaat  
480  
gaaggcgatc tcttccaccg gctgtggcac atcatgaatg aaatcctgga cctgaggcgg  
540  
caggtgctgg tgggccacct caccacgac cggatgaagg acgtgaagcg ccacattact  
600  
gccgggcttg actggggcaa tgaacaactg ggactggacc tggtagctag gaaagagtac  
660  
gcaatggtgg atccggaaga catcagcatt actgagctct accgattgtc catgctgac  
720  
atgtttttgt tggggggtgt cattcagatg gaacatcgac atcggaagaa agacaccccg  
780  
gtgcaggcca gcagtcacca cctctttgtc cagatgaaga gcctcatgtg ttccaacctg  
840  
ggagaggagc tggaggatcat cttctcactc tttgacagta aagagaaccg gccaatcagt  
900  
gagagatttt tcttgaggct gaatagaaac gggcttccca aagcccctga taaaccggaa  
960  
cgacattgct ccctctttgt ggatttgggc agcagtgagc taagaaagga catttatatc  
1020  
accgtgcaca ttatccgaat cggtcgaatg ggagcaggag aaaaaagaa tgcctgtagt  
1080  
gtccagtacc gacgaccctt tggctgtgca gttcttagca tcgctgacct gctaacagga  
1140  
gagacaaagg atgacctcat tctgaaagta tacatgtgta acacagagag tgagtggtag  
1200  
caaatccatg agaacatcat caaaaagctg aatgcacgtt ataacttgac tggctccaat  
1260  
gcaggtttag cagtttcctt acagctattg cacggagaca ttgaacaaat cagaagggaa  
1320  
tattcatcag tattttctca tggagtatcc ataacaagga agctgggatt ttcaaattt  
1380  
attatgcctg gtgaaatgag gaatgattta tatatcacta ttgaaagggg agaatttgag  
1440  
aaaggaggga agagcgtggc cagaaatgtg gaagttacga tgttcattgt agacagtagt  
1500  
ggccaaacc tgaaggattt tatctccttc ggctctgggg agccaccagc cagtgagtag  
1560  
cactcctttg tgctttacca taacaacagt ccaggtgggt ctgaactgct gaaacttccc  
1620  
attcctgtgg ataaattccg gggtagcacac atccgcttcg agtttcggca ttgttcaca  
1680  
aaggagaaag gagagaagaa gttgtttggg ttttcttttg tccctctgat gcaagaagat  
1740  
ggtaggactc ttccagatgg cactcatgag ctcatcgtgc ataagtgtga agaaaacaca  
1800  
aatcttcagg atactacccg ctacctcaaa cttccctttt ccaagggcat tttccttggg  
1860  
aataataatc aagccatgaa ggccacaaag gagtcctttt gtattacatc ttttctctgt  
1920  
tccacaaaac tcacacaaaa tggatgatg cttgatcttt tgaaatggag aaccaccca  
1980

gacaagatca ctggctgtct ctctaaatta aaagaaattg atggctcaga gatagtaaag  
2040  
tttctgcagg atacactgga taccttattt ggaatttttag atgaaaattc ccaaaaatat  
2100  
gggtctaaag tgtttgattc tttggttcac ataataaatt tgctgcaaga tagcaaattt  
2160  
catcatttta aacctgtaat ggacacttac attgagagtc attttgctgg ggcacttgca  
2220  
tacagagatc tcatcaaagt gctcaaattg tacgtggacc ggatcacaga agcagagcgg  
2280  
caagagcata tccaggagggt gctgaaggca caagaatata tttttaagta tatagttcaa  
2340  
tctcgaaggc tgttttccct tgccactggg gggcaaaacg aagaggagtt ccgctgctgc  
2400  
attcaggagc ttctcatgtc agtccgtttc tttctttcgc aagagagcaa agggctctgga  
2460  
gcattatctc agtcacaggc tgtgtttctg agctctttcc ctgccgtgta ctcagaactg  
2520  
ttgaagctct ttgatgtccg ggaagtagcc aacttggtcc aggacaccct gggcagtctg  
2580  
ccgaccatcc tgcattgtga tgattccctg caggccatca aactgcagtg cattggcaaa  
2640  
accgtggaaa gccagcttta taccaacca gattcccgat acattcttct gcctgtcgtg  
2700  
ttacatcacc tccacattca cttgcaagaa cagaaggacc tgatcatgtg tgcacgtatc  
2760  
cttagcaacg tattttgtct tatcaagaaa aatagctcag aaaaatctgt gctggaggaa  
2820  
atagatgtga tagtggccag cttgctggat attctgctga ggaccatatt ggagatcacc  
2880  
agccgacctc agccatccag ctcagcaatg cggttccagt tccaggatgt cactggggag  
2940  
tttgttgctt gtctcctgtc cctattacga caaatgacag atagacatta tcaacagctt  
3000  
cttgatagtt ttaatacaaa ggaagaacta agggtaagtg acattttaaa atgttttctt  
3060  
taacatatct tttgggttta tcttggtttt attcatcact gttgagataa atcctagaca  
3120  
attgctttac ctgtttccat taagttctaa gctgtttttc tcagcctcat ccacagatct  
3180  
gctcatctat attggctttt aaagatttct attactcaag caaagctatt aac  
3233

&lt;210&gt; 5160

&lt;211&gt; 849

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5160

Met	Asn	Glu	Ile	Leu	Asp	Leu	Arg	Arg	Gln	Val	Leu	Val	Gly	His	Leu
1				5					10					15	
Thr	His	Asp	Arg	Met	Lys	Asp	Val	Lys	Arg	His	Ile	Thr	Ala	Arg	Leu
				20				25					30		
Asp	Trp	Gly	Asn	Glu	Gln	Leu	Gly	Leu	Asp	Leu	Val	Pro	Arg	Lys	Glu

	35					40					45				
Tyr	Ala	Met	Val	Asp	Pro	Glu	Asp	Ile	Ser	Ile	Thr	Glu	Leu	Tyr	Arg
	50					55					60				
Leu	Ser	Met	Leu	Ile	Met	Phe	Leu	Leu	Gly	Gly	Val	Ile	Gln	Met	Glu
65					70					75					80
His	Arg	His	Arg	Lys	Lys	Asp	Thr	Pro	Val	Gln	Ala	Ser	Ser	His	His
				85					90					95	
Leu	Phe	Val	Gln	Met	Lys	Ser	Leu	Met	Cys	Ser	Asn	Leu	Gly	Glu	Glu
			100					105					110		
Leu	Glu	Val	Ile	Phe	Ser	Leu	Phe	Asp	Ser	Lys	Glu	Asn	Arg	Pro	Ile
		115					120					125			
Ser	Glu	Arg	Phe	Phe	Leu	Arg	Leu	Asn	Arg	Asn	Gly	Leu	Pro	Lys	Ala
	130					135					140				
Pro	Asp	Lys	Pro	Glu	Arg	His	Cys	Ser	Leu	Phe	Val	Asp	Leu	Gly	Ser
145					150					155					160
Ser	Glu	Leu	Arg	Lys	Asp	Ile	Tyr	Ile	Thr	Val	His	Ile	Ile	Arg	Ile
				165					170					175	
Gly	Arg	Met	Gly	Ala	Gly	Glu	Lys	Lys	Asn	Ala	Cys	Ser	Val	Gln	Tyr
			180					185					190		
Arg	Arg	Pro	Phe	Gly	Cys	Ala	Val	Leu	Ser	Ile	Ala	Asp	Leu	Leu	Thr
		195					200					205			
Gly	Glu	Thr	Lys	Asp	Asp	Leu	Ile	Leu	Lys	Val	Tyr	Met	Cys	Asn	Thr
	210					215					220				
Glu	Ser	Glu	Trp	Tyr	Gln	Ile	His	Glu	Asn	Ile	Ile	Lys	Lys	Leu	Asn
225					230					235					240
Ala	Arg	Tyr	Asn	Leu	Thr	Gly	Ser	Asn	Ala	Gly	Leu	Ala	Val	Ser	Leu
				245					250					255	
Gln	Leu	Leu	His	Gly	Asp	Ile	Glu	Gln	Ile	Arg	Arg	Glu	Tyr	Ser	Ser
			260					265					270		
Val	Phe	Ser	His	Gly	Val	Ser	Ile	Thr	Arg	Lys	Leu	Gly	Phe	Ser	Asn
		275					280					285			
Ile	Ile	Met	Pro	Gly	Glu	Met	Arg	Asn	Asp	Leu	Tyr	Ile	Thr	Ile	Glu
	290					295					300				
Arg	Gly	Glu	Phe	Glu	Lys	Gly	Gly	Lys	Ser	Val	Ala	Arg	Asn	Val	Glu
305					310					315					320
Val	Thr	Met	Phe	Ile	Val	Asp	Ser	Ser	Gly	Gln	Thr	Leu	Lys	Asp	Phe
				325					330					335	
Ile	Ser	Phe	Gly	Ser	Gly	Glu	Pro	Pro	Ala	Ser	Glu	Tyr	His	Ser	Phe
			340					345					350		
Val	Leu	Tyr	His	Asn	Asn	Ser	Pro	Arg	Trp	Ser	Glu	Leu	Leu	Lys	Leu
		355					360					365			
Pro	Ile	Pro	Val	Asp	Lys	Phe	Arg	Gly	Ala	His	Ile	Arg	Phe	Glu	Phe
	370					375					380				
Arg	His	Cys	Ser	Thr	Lys	Glu	Lys	Gly	Glu	Lys	Lys	Leu	Phe	Gly	Phe
385					390					395					400
Ser</															

465                      470                      475                      480  
 Asp Leu Leu Lys Trp Arg Thr His Pro Asp Lys Ile Thr Gly Cys Leu  
                          485                      490                      495  
 Ser Lys Leu Lys Glu Ile Asp Gly Ser Glu Ile Val Lys Phe Leu Gln  
                          500                      505                      510  
 Asp Thr Leu Asp Thr Leu Phe Gly Ile Leu Asp Glu Asn Ser Gln Lys  
                          515                      520                      525  
 Tyr Gly Ser Lys Val Phe Asp Ser Leu Val His Ile Ile Asn Leu Leu  
                          530                      535                      540  
 Gln Asp Ser Lys Phe His His Phe Lys Pro Val Met Asp Thr Tyr Ile  
 545                      550                      555                      560  
 Glu Ser His Phe Ala Gly Ala Leu Ala Tyr Arg Asp Leu Ile Lys Val  
                          565                      570                      575  
 Leu Lys Trp Tyr Val Asp Arg Ile Thr Glu Ala Glu Arg Gln Glu His  
                          580                      585                      590  
 Ile Gln Glu Val Leu Lys Ala Gln Glu Tyr Ile Phe Lys Tyr Ile Val  
                          595                      600                      605  
 Gln Ser Arg Arg Leu Phe Ser Leu Ala Thr Gly Gly Gln Asn Glu Glu  
                          610                      615                      620  
 Glu Phe Arg Cys Cys Ile Gln Glu Leu Leu Met Ser Val Arg Phe Phe  
 625                      630                      635                      640  
 Leu Ser Gln Glu Ser Lys Gly Ser Gly Ala Leu Ser Gln Ser Gln Ala  
                          645                      650                      655  
 Val Phe Leu Ser Ser Phe Pro Ala Val Tyr Ser Glu Leu Leu Lys Leu  
                          660                      665                      670  
 Phe Asp Val Arg Glu Val Ala Asn Leu Val Gln Asp Thr Leu Gly Ser  
                          675                      680                      685  
 Leu Pro Thr Ile Leu His Val Asp Asp Ser Leu Gln Ala Ile Lys Leu  
                          690                      695                      700  
 Gln Cys Ile Gly Lys Thr Val Glu Ser Gln Leu Tyr Thr Asn Pro Asp  
 705                      710                      715                      720  
 Ser Arg Tyr Ile Leu Leu Pro Val Val Leu His His Leu His Ile His  
                          725                      730                      735  
 Leu Gln Glu Gln Lys Asp Leu Ile Met Cys Ala Arg Ile Leu Ser Asn  
                          740                      745                      750  
 Val Phe Cys Leu Ile Lys Lys Asn Ser Ser Glu Lys Ser Val Leu Glu  
                          755                      760                      765  
 Glu Ile Asp Val Ile Val Ala Ser Leu Leu Asp Ile Leu Leu Arg Thr  
                          770                      775                      780  
 Ile Leu Glu Ile Thr Ser Arg Pro Gln Pro Ser Ser Ser Ala Met Arg  
 785                      790                      795                      800  
 Phe Gln Phe Gln Asp Val Thr Gly Glu Phe Val Ala Cys Leu Leu Ser  
                          805                      810                      815  
 Leu Leu Arg Gln Met Thr Asp Arg His Tyr Gln Gln Leu Leu Asp Ser  
                          820                      825                      830  
 Phe Asn Thr Lys Glu Glu Leu Arg Val Ser Asp Ile Leu Lys Cys Phe  
                          835                      840                      845  
 Leu

&lt;210&gt; 5161

&lt;211&gt; 1645

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5161

ntggggcccc cagatttgcg ccattgcact ccagccttgg gacttgacgc tttcgaaacc  
60  
aaagggagag caaaagcagc cgggagcgcg cgggccgacc tggttctcct cccttcccac  
120  
ggctgcctta gtacagaatc ttataagtcc tcctccctca gaggtacag atggtgttcc  
180  
gaggccaggg gagtttaaag ctcgatttca cccgcgcagc ctccaatccg ggtgttctga  
240  
gaatcagcca tgtcatccct gtacccatct ctagaggacc taaaagtgga ccaagccatt  
300  
caggcccagg tcagagcctc acccaagatg ccagccctgc cagtccaggc aacagccatt  
360  
tccccaccac cagttttgta cccaaacttg gcagaactgg aaaattatat gggctcttcc  
420  
ctctccagcc aagaagtcca ggagagcctg cttcagattc cagaggggtga cagtacagcg  
480  
gtctcgggcc ccgggcccgg ccagatggtg gcaccggtaa ccgggtacag cctgggcgtg  
540  
cggcgagctg agatcaagcc cggggtgcgc gagatccacc tgtgcaagga cgagcgcggc  
600  
aagaccgggc tgaggctgcg gaaggctgcac caggggctct ttgtgcagtt ggtccaggcc  
660  
aacaccctg catcccttgt ggggctgcgc tttggggacc agctcctgca gattgacggg  
720  
cgtgactgtg ctgggtggag ctcgcacaaa gcccatcagg tgggaagaa ggcacaggc  
780  
gataagattg tcgtggtggt tcgggacagg ccgttccagc ggactgtcac catgcacaag  
840  
gacagcatgg gccacgtcgg cttcgtgatc aagaagggga agattgtctc tctggtcaaa  
900  
gggagttctg cggcctgcaa cgggctcctc accaaccact acgtgtgtga ggtggacggg  
960  
cagaatgta tcgggctgaa ggacaaaaag atcatggaga ttctggccac ggctgggaac  
1020  
gttgtcacc tgaccatcat ccccagtgtg atctacgagc acatgggtcaa aaagtgtcct  
1080  
ccagtcctgc tccaccacac catggaccac tccatcccag atgcctgaag ccactggagg  
1140  
gcagggcagg cagggggggc ttcccgcctt cctgcagcaa agggcaacca ccctcggatg  
1200  
atgggttgca gccggcctgc tgcttaaggt gggggctgcc atgagggggg cgtgtccagg  
1260  
agggtgacca tgggatggct tatacacaca ggcctccttg gagcctcaga ctccaagcta  
1320  
ggctgaggct caggcagggc ccacaggcag ccgattctct tgtgtgatt taaatgctgg  
1380  
acacggaggc aggctgttta aacgctgctt aaagtgcgaa ctgggcccct ttcaagaaat  
1440  
tttgctctac caggaaaaca gttacacatt ttaagagaac agagctacgt tctttgtgag  
1500  
agctttttcc ttggcttgac ttgctctttg tcacagactg cataagttgt cagccttgac  
1560

tatcttttga ataaagattt gatttttaaac aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1620  
aaaaaaaaaa aaaaaaaaaa aaaaaa  
1645

<210> 5162  
<211> 207  
<212> PRT  
<213> Homo sapiens

<400> 5162  
Met Val Ala Pro Val Thr Gly Tyr Ser Leu Gly Val Arg Arg Ala Glu  
1 5 10 15  
Ile Lys Pro Gly Val Arg Glu Ile His Leu Cys Lys Asp Glu Arg Gly  
20 25 30  
Lys Thr Gly Leu Arg Leu Arg Lys Val Asp Gln Gly Leu Phe Val Gln  
35 40 45  
Leu Val Gln Ala Asn Thr Pro Ala Ser Leu Val Gly Leu Arg Phe Gly  
50 55 60  
Asp Gln Leu Leu Gln Ile Asp Gly Arg Asp Cys Ala Gly Trp Ser Ser  
65 70 75 80  
His Lys Ala His Gln Val Val Lys Lys Ala Ser Gly Asp Lys Ile Val  
85 90 95  
Val Val Val Arg Asp Arg Pro Phe Gln Arg Thr Val Thr Met His Lys  
100 105 110  
Asp Ser Met Gly His Val Gly Phe Val Ile Lys Lys Gly Lys Ile Val  
115 120 125  
Ser Leu Val Lys Gly Ser Ser Ala Ala Cys Asn Gly Leu Leu Thr Asn  
130 135 140  
His Tyr Val Cys Glu Val Asp Gly Gln Asn Val Ile Gly Leu Lys Asp  
145 150 155 160  
Lys Lys Ile Met Glu Ile Leu Ala Thr Ala Gly Asn Val Val Thr Leu  
165 170 175  
Thr Ile Ile Pro Ser Val Ile Tyr Glu His Met Val Lys Lys Leu Pro  
180 185 190  
Pro Val Leu Leu His His Thr Met Asp His Ser Ile Pro Asp Ala  
195 200 205

<210> 5163  
<211> 1187  
<212> DNA  
<213> Homo sapiens

<400> 5163  
nngtagagac ggggctctcc gtgttgctca ggctggctgc tgcacttcga ttcctgtgct  
60  
tggtctggct gaaggcgccg gccgctcaag cgtgtttcgg cagatatttt tgagaacatt  
120  
tttttatttt taaatacatg tatagcatga gtgatggagc caaacacaag ttttgaagcc  
180  
aagctcttgg ttctgagaaa caggcccaac actgcacagt gtcattcgca gtcaacccaa  
240  
ccactgtctg agttcacgtg acgatttctc ctgccaggtc acgggaagtt gttattttaa  
300

gatggcagtt attacgaagg ggcgtttgtg gacggagaga tcacgggaga aggccgccgg  
 360  
 cactgggcct ggtcaggaga caccttctct ggacagtttg ttctgggaga gcctcaaggc  
 420  
 tacggcgtca tggagtacaa agccggcgga tggtatgaag gggaggtctc ccacggcatg  
 480  
 cgggaaggac acgggtttct ggtggaccgg gatggacaag tgtaccaggg ctccttccat  
 540  
 gacaacaaga ggcacggccc tgggcagatg ctctttcaga acggtgacaa gtacgacggc  
 600  
 gactgggtcc gggaccggcg tcaggacac ggggtgctgc gctgcgccga cggctccacc  
 660  
 tacaaggagc agtggcacag cgacgtcttc agtggactgg gcagcatggc cactgctca  
 720  
 ggggtcacct attatgggtt gtggatcaat ggccaccag cagaacaagc tacgaggatc  
 780  
 gtgatcttgg gtccggaggt gatggaagtg gcccaagggt ctcccttctc ggtgaacgtt  
 840  
 cagctgctgc aggaccacgg ggaaattgcc aagagtaagc atctccaggg ggagatgacc  
 900  
 taacgtttcc aaaagagaaa caggcagcag gttcttaagc agtgaagatg cggacgagat  
 960  
 gttgcatgtg gctcctgagg cacagcagtg acttcgtgcc cagagcctgg cagagaggtc  
 1020  
 gcaggtgtgc cagcttccct gccagtcagg gcagccttgg gtgtgtgtgc aagcatgtgt  
 1080  
 gcacatattg tgtgatgtgc gtgtcctgt atgtgtgtgc atatgtgtgt atgccttgea  
 1140  
 caggtgtgca caggtctgaa tgtgtatacg tgtggggggg cacgcgt  
 1187

<210> 5164

<211> 213

<212> PRT

<213> Homo sapiens

<400> 5164

Arg	Phe	Leu	Leu	Pro	Gly	His	Gly	Lys	Leu	Leu	Phe	Lys	Asp	Gly	Ser
1				5				10						15	
Tyr	Tyr	Glu	Gly	Ala	Phe	Val	Asp	Gly	Glu	Ile	Thr	Gly	Glu	Gly	Arg
			20					25						30	
Arg	His	Trp	Ala	Trp	Ser	Gly	Asp	Thr	Phe	Ser	Gly	Gln	Phe	Val	Leu
			35					40						45	
Gly	Glu	Pro	Gln	Gly	Tyr	Gly	Val	Met	Glu	Tyr	Lys	Ala	Gly	Gly	Cys
			50					55						60	
Tyr	Glu	Gly	Glu	Val	Ser	His	Gly	Met	Arg	Glu	Gly	His	Gly	Phe	Leu
65								70						75	
Val	Asp	Arg	Asp	Gly	Gln	Val	Tyr	Gln	Gly	Ser	Phe	His	Asp	Asn	Lys
Arg	His	Gly	Pro	Gly	Gln	Met	Leu	Phe	Gln	Asn	Gly	Asp	Lys	Tyr	Asp
Gly	Asp	Trp	Val	Arg	Asp	Arg	Arg	Gln	Gly	His	Gly	Val	Leu	Arg	Cys
Ala	Asp	Gly	Ser	Thr	Tyr	Lys	Gly	Gln	Trp	His	Ser	Asp	Val	Phe	Ser



130	135	140
Gly Leu Gly Ser Met Ala His Cys Ser Gly Val Thr Tyr Tyr Gly Leu		
145	150	155
Trp Ile Asn Gly His Pro Ala Glu Gln Ala Thr Arg Ile Val Ile Leu		160
	165	170
Gly Pro Glu Val Met Glu Val Ala Gln Gly Ser Pro Phe Ser Val Asn		175
	180	185
Val Gln Leu Leu Gln Asp His Gly Glu Ile Ala Lys Ser Lys His Leu		190
	195	200
Gln Gly Glu Met Thr		205
210		

&lt;210&gt; 5165

&lt;211&gt; 2370

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5165

```

cagtccagtg ctgctgtcgc tggaaccctg cagagggcgg tgggtgagcg gctggggccc
60
cgtggagcca ccatggaccc cgcaggggca gcagaccctc cagtgcctcc caatcctttg
120
actcacctga gcctgcagga cagatcagag atgcagctgc agagcgaagc cgacaggcgg
180
agcctcccgg gcacttggac caggtcatcc ccagagcaca ccaccattct gaggggaggg
240
gtgcgcaggt gcctgcagca acagtgtgaa cagactgtgc ggatcctgca tgccaagggtg
300
gcccagaaat catacggaaa tgagaagcgg ttcttctgcc ccccgccctg tgtctacctc
360
tcggggcctg gctggagggt gaagccaggg caggatcaag ctcaccaggc gggggaaacg
420
gggcccacgg tctgcggtta catgggactg gacagcgcgt ccggcagcgc cactgagacg
480
cagaagctga atttcgagca gcagccggac tccagggaat tcggctgcgc caagaccctg
540
tacatctcag atgcagacaa gaggaagcac ttctcggctg tgctgcggct ggtgctgcgc
600
gggggccggg agctgggtac cttccacagc cgccttatca aggtcatctc gaagccctcg
660
cagaagaagc agtcgctgaa aaacaccgat ctgtgcatat cctccggctc aaaggtctcc
720
ctcttcaacc gcctgcgctc tcagacggtc tccacacgct acctctctgt ggaggatggg
780
gcctttgtgg ccagtgcacg acagtgggct gccttcacgc tccacctggc tgatgggcac
840
tctgccaag gagacttccc accgcgagag ggctacgttc gctatggctc cctggtgcag
900
ctcgtctgca cggtcaccgg catcacacta cctcccatga tcatccgtaa agtagcaaaa
960
cagtgtgcgc tccttgatgt ggatgagccc atctcccagc tgcacaagtg tgcattccag
1020
tttcaggca gtccccagg aggggggtgg acctacttat gccttgccac agagaagggtg
1080

```

gtgcaatttc aggcctctcc ctgccccaaag gaggcgaaca gggctctgct taacgacagc  
1140  
tcttgctgga ccatcatcgg caccgagtcg gtggaatttt ccttcagcac cagcctggcg  
1200  
tgtaccctgg agccgggtcac tccgggtgect ctcatcagca ccctagagct gagcggcggg  
1260  
ggcgacgtgg ccacgctgga gctccacgga gagaacttcc acgcggggct caaggtgtgg  
1320  
tttggggacg tggaggcaga aaccatgtac aggtacgggg tgnngagccc gcggtccctg  
1380  
gtgtgcgtgg tgccggacgt ggcggccttc tgcagcgact ggcgctggct gcgcgctccc  
1440  
atcacaatcc ccatgagcct ggtgcgcgcc gacgggctct tctaccctag tgccttctcc  
1500  
ttcacctaca ccccggaata cagcgtgcgg ccgggtcacc ccggcgctccc cgagcccgcc  
1560  
accgacgccg acgcgctcct ggagagcatc catcaggagt tcacgcgcac caacttcac  
1620  
ctcttcatcc agacttaggc gcgcccggta gcccggctg cccaccctgg agggctgcgc  
1680  
ccgcgccagg cgcggggacg tgtttctggg ttctaggccc tgcttccttg cccctttgct  
1740  
gcagaagggc agctgaaggc tcaccctaga aaccgggcct ggtgggtctt acccggtca  
1800  
ctccctccct tgccttaca catacaggaa gacaagacct gagtgggtgt gtctttgtgt  
1860  
ccgtcgtgta tggtctccc tgtcttcatt tcttctcact ctgtctctaa acctctctct  
1920  
ctctcccttc cccctcagta cttagtctac agacctatgt gcgtgtccct atccttctgt  
1980  
ccttttctct cttcagctct ccctgcctct cacacacaat ttacatgcc ccgaggagcc  
2040  
aagtttgga catttacct ccaggcatct atgtcccctc ttgaagagaa aacacacagc  
2100  
ttcacacatc caggcatagg gggcaagctc ttggggcatc aggaccctgg agcaccaggt  
2160  
ccttctgga atattagatc cacctggaga accgggtctc tctaagtctc acctggggaa  
2220  
ttcgggtccca cctggggcac cagttccac ctagagcact gtgtcctgcc ctagagcaca  
2280  
aagacctgct cctcccgaga ctctctctga ctgcagccag gcatagtacc cttgcctgtg  
2340  
tttgcctcct ggtccacaga tttggtggct  
2370

&lt;210&gt; 5166

&lt;211&gt; 521

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5166

Met	Asp	Pro	Ala	Gly	Ala	Ala	Asp	Pro	Ser	Val	Pro	Pro	Asn	Pro	Leu
1				5				10					15		
Thr	His	Leu	Ser	Leu	Gln	Asp	Arg	Ser	Glu	Met	Gln	Leu	Gln	Ser	Glu

	20		25		30										
Ala	Asp	Arg	Arg	Ser	Leu	Pro	Gly	Thr	Trp	Thr	Arg	Ser	Ser	Pro	Glu
	35		40		45										
His	Thr	Thr	Ile	Leu	Arg	Gly	Gly	Val	Arg	Arg	Cys	Leu	Gln	Gln	Gln
	50		55		60										
Cys	Glu	Gln	Thr	Val	Arg	Ile	Leu	His	Ala	Lys	Val	Ala	Gln	Lys	Ser
65			70		75				80						
Tyr	Gly	Asn	Glu	Lys	Arg	Phe	Phe	Cys	Pro	Pro	Pro	Cys	Val	Tyr	Leu
	85		90		95										
Ser	Gly	Pro	Gly	Trp	Arg	Val	Lys	Pro	Gly	Gln	Asp	Gln	Ala	His	Gln
	100		105		110										
Ala	Gly	Glu	Thr	Gly	Pro	Thr	Val	Cys	Gly	Tyr	Met	Gly	Leu	Asp	Ser
	115		120		125										
Ala	Ser	Gly	Ser	Ala	Thr	Glu	Thr	Gln	Lys	Leu	Asn	Phe	Glu	Gln	Gln
	130		135		140										
Pro	Asp	Ser	Arg	Glu	Phe	Gly	Cys	Ala	Lys	Thr	Leu	Tyr	Ile	Ser	Asp
145			150		155										160
Ala	Asp	Lys	Arg	Lys	His	Phe	Arg	Leu	Val	Leu	Arg	Leu	Val	Leu	Arg
	165		170		175										
Gly	Gly	Arg	Glu	Leu	Gly	Thr	Phe	His	Ser	Arg	Leu	Ile	Lys	Val	Ile
	180		185		190										
Ser	Lys	Pro	Ser	Gln	Lys	Lys	Gln	Ser	Leu	Lys	Asn	Thr	Asp	Leu	Cys
	195		200		205										
Ile	Ser	Ser	Gly	Ser	Lys	Val	Ser	Leu	Phe	Asn	Arg	Leu	Arg	Ser	Gln
	210		215		220										
Thr	Val	Ser	Thr	Arg	Tyr	Leu	Ser	Val	Glu	Asp	Gly	Ala	Phe	Val	Ala
225			230		235										240
Ser	Ala	Arg	Gln	Trp	Ala	Ala	Phe	Thr	Leu	His	Leu	Ala	Asp	Gly	His
	245		250		255										
Ser	Ala	Gln	Gly	Asp	Phe	Pro	Pro	Arg	Glu	Gly	Tyr	Val	Arg	Tyr	Gly
	260		265		270										
Ser	Leu	Val	Gln	Leu	Val	Cys	Thr	Val	Thr	Gly	Ile	Thr	Leu	Pro	Pro
	275		280		285										
Met	Ile	Ile	Arg	Lys	Val	Ala	Lys	Gln	Cys	Ala	Leu	Leu	Asp	Val	Asp
	290		295		300										
Glu	Pro	Ile	Ser	Gln	Leu	His	Lys	Cys	Ala	Phe	Gln	Phe	Pro	Gly	Ser
305			310		315										320
Pro	Pro	Gly	Gly	Gly	Gly	Thr	Tyr	Leu	Cys	Leu	Ala	Thr	Glu	Lys	Val
	325		330		335										
Val	Gln	Phe	Gln	Ala	Ser	Pro	Cys	Pro	Lys	Glu	Ala	Asn	Arg	Ala	Leu
	340		345		350										
Leu	Asn	Asp	Ser	Ser	Cys	Trp	Thr	Ile	Ile	Gly	Thr	Glu	Ser	Val	Glu
	355		360		365										
Phe	Ser	Phe	Ser	Thr	Ser	Leu	Ala	Cys	Thr	Leu	Glu	Pro	Val	Thr	Pro
	370		375		380										
Val	Pro	Leu	Ile	Ser	Thr	Leu	Glu	Leu	Ser	Gly	Gly	Gly	Asp	Val	Ala
385			390		395										400
Thr	Leu	Glu	Leu	His	Gly	Glu	Asn	Phe	His	Ala	Gly	Leu	Lys	Val	Trp
	405		410		415										
Phe	Gly	Asp	Val	Glu	Ala	Glu	Thr	Met	Tyr	Arg	Tyr	Gly	Val	Xaa	Ser
	420		425		430										
Pro	Arg	Ser	Leu	Val	Cys	Val	Val	Pro	Asp	Val	Ala	Ala	Phe	Cys	Ser
	435		440		445										
Asp	Trp	Arg	Trp	Leu	Arg	Ala	Pro	Ile	Thr	Ile	Pro	Met	Ser	Leu	Val

450                      455                      460  
 Arg Ala Asp Gly Leu Phe Tyr Pro Ser Ala Phe Ser Phe Thr Tyr Thr  
 465                      470                      475                      480  
 Pro Glu Tyr Ser Val Arg Pro Gly His Pro Gly Val Pro Glu Pro Ala  
                     485                      490                      495  
 Thr Asp Ala Asp Ala Leu Leu Glu Ser Ile His Gln Glu Phe Thr Arg  
                     500                      505                      510  
 Thr Asn Phe His Leu Phe Ile Gln Thr  
                     515                      520

<210> 5167  
 <211> 878  
 <212> DNA  
 <213> Homo sapiens

<400> 5167  
 gggccccgga ccaggcgctg gggacacagc agtgaaaata ctaacattgt ttctgccctc  
 60  
 acggagctca cagtgtaca gggagacaaa tagacctgtc agtagataac atgaaaataa  
 120  
 ttggactgtg tgctgcagac acaatatccc aggtctatga gaatgtcaat acagacttca  
 180  
 cgtgggaaat ggtgaggcaa taaggatcgt ttcccttgat gaaatggagc ttgcagaaga  
 240  
 aggcagggtc agttgtgggg agctctgggt ggaggtggag ggagtgcatt ccaagctgag  
 300  
 ccaagctatg acacctgagt ttccctgcctc tgtgctgcct ccctgttttc cattcccggg  
 360  
 tctcagcttc acttgtgggc tgagagtccc tgcgtgggtt atttttctgc ctttctcagg  
 420  
 gccttgggtt ccccaaagt cacatgggca cagtaacacc catgtcctag ggttgaagat  
 480  
 ggcatgatat gatgtatgta aaatgcttgg cacaagggtt ctcaccgaag tctggaggag  
 540  
 ctgtccaggg ttctggagac gaaacggagc ccgctgggaa ctgtcctgag ccccggtgct  
 600  
 gaaacagatc gcggttctct tctcggacct cccgagaggc gctgtccgga tatttggtgc  
 660  
 tcccaagcag tcagccctgc tgggtctctgc ttccagacc gtcaaacttc gccatctctg  
 720  
 tccctttttg ggaaaatgct catgcgcaa cctgcaaacc agcctcatte ccggcatccc  
 780  
 acgtccctca gaccaccct cctcccagc agctgcggga ctccccctct gtgtgcctca  
 840  
 cctgcttcca gtcttggttg cagatgcagg tgtcccgt  
 878

<210> 5168  
 <211> 199  
 <212> PRT  
 <213> Homo sapiens

<400> 5168  
 Met Pro Gly Met Arg Leu Val Cys Arg Leu Ala His Gly His Phe Pro

```

1           5           10           15
Lys Lys Gly Gln Arg Trp Arg Ser Leu Thr Val Trp Lys Ala Glu Thr
20           25           30
Ser Arg Ala Asp Cys Leu Gly Ala Pro Asn Ile Arg Thr Ala Pro Leu
35           40           45
Gly Arg Ser Glu Lys Arg Thr Ala Ile Cys Phe Ser Thr Gly Ala Gln
50           55           60
Asp Ser Ser Gln Arg Ala Pro Phe Arg Leu Gln Asn Pro Gly Gln Leu
65           70           75           80
Leu Gln Thr Ser Val Arg Asn Leu Val Pro Ser Ile Leu His Thr Ser
85           90           95
Tyr His Ala Ile Phe Asn Pro Arg Thr Trp Val Leu Leu Cys Pro Cys
100          105          110
Asp Ile Trp Gly Thr Gln Gly Pro Glu Lys Gly Arg Lys Ile Thr His
115          120          125
Ala Gly Thr Leu Ser Pro Gln Val Lys Leu Arg Thr Gly Asn Gly Lys
130          135          140
Gln Gly Gly Ser Thr Glu Ala Gly Asn Ser Gly Val Ile Ala Trp Leu
145          150          155          160
Ser Leu Glu Cys Thr Pro Ser Thr Ser Thr Gln Ser Ser Pro Gln Leu
165          170          175
Thr Leu Pro Ser Ser Ala Ser Ser Ile Ser Ser Arg Glu Thr Ile Leu
180          185          190
Ile Ala Ser Pro Phe Pro Thr
195

```

&lt;210&gt; 5169

&lt;211&gt; 609

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5169

```

accggtggct ttgcactcta cccgctgctc aacgaggctg cgccggtggc gctggggggcc
60
ggtttgggtgc ctgaggagct gccaccatcc cgcgggggcc tgggtgagggc actgggtgccc
120
gtggagctta gcctcagcga gttcctgcta ctcttcacca ctgctggcat ctacgtggat
180
ggcgcaggcc gcaagtctcg tggccacgag ctgttgtggc cagcagcgcc catgggctgg
240
gggtatgcgg cccctacct gacagtgttc agcgagaact ccatcgatgt gtttgacgtg
300
aggagggcag aatgggtgca gaccgtgccg ctcaagaagg tgcggccctt caatccagag
360
ggctccctgt tcctctacgg caccgagaag gtccgcctga cctacctcag gaaccagctg
420
gcagagaagg acgagttcga catcccggac ctcaccgaca acagccggcg ccagctgttc
480
ctcaccaaga gcaagcgccg cttctttttc cgcgtgtcgg aggagcagca gaagcagcag
540
cgcagggaga tgctgaagga cccttttgtg cgctccaagc tcatctcgcc gcctaccaac
600
ttcaaccac
609

```

<210> 5170  
 <211> 203  
 <212> PRT  
 <213> Homo sapiens

<400> 5170  
 Thr Gly Gly Phe Ala Leu Tyr Pro Leu Leu Asn Glu Ala Ala Pro Leu  
 1 5 10 15  
 Ala Leu Gly Ala Gly Leu Val Pro Glu Glu Leu Pro Pro Ser Arg Gly  
 20 25 30  
 Gly Leu Gly Glu Ala Leu Gly Ala Val Glu Leu Ser Leu Ser Glu Phe  
 35 40 45  
 Leu Leu Leu Phe Thr Thr Ala Gly Ile Tyr Val Asp Gly Ala Gly Arg  
 50 55 60  
 Lys Ser Arg Gly His Glu Leu Leu Trp Pro Ala Ala Pro Met Gly Trp  
 65 70 75 80  
 Gly Tyr Ala Ala Pro Tyr Leu Thr Val Phe Ser Glu Asn Ser Ile Asp  
 85 90 95  
 Val Phe Asp Val Arg Arg Ala Glu Trp Val Gln Thr Val Pro Leu Lys  
 100 105 110  
 Lys Val Arg Pro Leu Asn Pro Glu Gly Ser Leu Phe Leu Tyr Gly Thr  
 115 120 125  
 Glu Lys Val Arg Leu Thr Tyr Leu Arg Asn Gln Leu Ala Glu Lys Asp  
 130 135 140  
 Glu Phe Asp Ile Pro Asp Leu Thr Asp Asn Ser Arg Arg Gln Leu Phe  
 145 150 155 160  
 Leu Thr Lys Ser Lys Arg Arg Phe Phe Phe Arg Val Ser Glu Glu Gln  
 165 170 175  
 Gln Lys Gln Gln Arg Arg Glu Met Leu Lys Asp Pro Phe Val Arg Ser  
 180 185 190  
 Lys Leu Ile Ser Pro Pro Thr Asn Phe Asn His  
 195 200

<210> 5171  
 <211> 2060  
 <212> DNA  
 <213> Homo sapiens

<400> 5171  
 gaacagaggg ggtggaaact gcatcacaga tgttttccaa ggtccagggt ggaatctgag  
 60  
 ctctagtgtc tgactttgag atgcattata tttttaacac ataaatgagg ggatccatat  
 120  
 cacattcttt cttgtggacc accaaattga aggctttctt gtaattcaca agcagcagct  
 180  
 ctccagcatc tctccgtagc ctgggtgaag tcccagaagc tgggtgtgcat cattttccaa  
 240  
 ggtggcagag ctgcttgctc tgcagatcat tcctttgaga gaggagtaca agtgaagaaa  
 300  
 caaggaggca cttcctgtag gagcactgat gtgccttgct cacactcccc tctgagcttt  
 360  
 actggtaaga gagctccgac tgaacatgct gagcagttga gcacttttcc atcagcaaca  
 420

acagcgagga tggaaatgga aaggaaccga actaaaatgc atttcccttt gcagggcaga  
480  
gagctaagct cttaggaata gtgttataga aataagcacc ctaacttcaa ttcctgaaaa  
540  
tggttggttaa tggagagaat tttggagttt cacttaatat ttcccatcg gtcgccataa  
600  
ataagtcttc aggcgctcct agaagagtcc cagcccaagg ctgattaag gaccacactg  
660  
caggtctgag gctcactgct ctgagtcctg aacaccagag ccctgcagag agtgggtgata  
720  
acacatcatc tctgcaaaga ggaacctctc ccccgccgc cacttctc aggccttctac  
780  
tgagcagcaa ggacagcctg gggttcaa atgccacttccc ctgctttagg gatccagggtg  
840  
tcctgatagc gtgacctgc tgaggcaagg tatcaactcc gagagtgact gagtcactga  
900  
gcgtggcaca tgaacaaacg tcatgacaaa gattctctga gtgaagttaa caccacgtat  
960  
tttacctttg caaaaaacaa actggcacc tggagttctaa ctacggacgg acgatatctt  
1020  
tgcctccaca cccagattcc tggaaatggc taacgtttcc tttctagggg aagggtcgag  
1080  
gaatactcaa gtgctagctt agcagctttg ttcagtcag atcagagctg ttaggtaaag  
1140  
gcctaaccac ctccctgcag tctcttatat ctcaagcttt aggaacccat ttctaaatgt  
1200  
acactagcgg agaatttata ttgtcagcct tgattaccat aggacaggca gaaaggcgat  
1260  
aatttgatc ttttaataata aaagaagctt ttaactttc cagcctatta ttataactga  
1320  
gttatattca ctgtggctca aactaattgg cattgtggaa catttcttta ccttcaaagt  
1380  
ttctccacc aatcatttca gttctattgc agtcctgggtg ccatatgtcc cctgcaaatt  
1440  
gtgaaagtaa ttagtgacaa aatagcagcc tgctcctttt caatggcgaa actgtcggca  
1500  
ttagcagttt tgggtaagct ggcggtacta taacacgtac tggaaacctg ttcctcatca  
1560  
ccacctacca gattctggaa atgcgctctt ctgaaaaacg atggcgtttg tgggtggtctt  
1620  
cttttgaaag gaacagtaat ttgtgtggat attgttaaag tgtttaaaga atattttgac  
1680  
aattaagttt acattttaca attgctttat tttttattaa aatagttgta tataaatatt  
1740  
accctatttc actgttggtc aagtaaactc aaaccttgta gacaagtgag tcacctgata  
1800  
tgtatagaag ctgtgatata tagagtacat ttattgtgta aatgtttatg aatataattg  
1860  
ttcctgtgtt tttataagtt ggggatattt tgttgtttta cggcaacaaa atttattgca  
1920  
tttaaaggt ttttatgtaa tagaaatcac gcaaaatagt gaaggattta aaatatgtat  
1980  
atgatacatg taaatgtaca aacttttagaa agaaataaat ccaacaaatt tcaaaaaaaa  
2040

aaaaaaaaaa aaaaaaaaaa  
2060

<210> 5172  
<211> 104  
<212> PRT  
<213> Homo sapiens

<400> 5172  
Met Leu Val Asn Gly Glu Asn Phe Gly Val Ser Leu Asn Ile Phe Pro  
1 5 10 15  
Ser Val Ala Ile Asn Lys Ser Ser Gly Ala Pro Arg Arg Val Pro Ala  
20 25 30  
Gln Gly Ser Ile Lys Asp His Thr Ala Gly Leu Arg Leu Thr Ala Leu  
35 40 45  
Ser Pro Glu His Gln Ser Pro Ala Glu Ser Gly Asp Asn Thr Ser Ser  
50 55 60  
Leu Gln Arg Gly Thr Ser Pro Pro Ala Ala Thr Ser Leu Arg Leu Leu  
65 70 75 80  
Leu Ser Ser Lys Asp Ser Leu Gly Phe Lys Cys His Phe Pro Cys Phe  
85 90 95  
Arg Asp Pro Gly Val Leu Ile Ala  
100

<210> 5173  
<211> 557  
<212> DNA  
<213> Homo sapiens

<400> 5173  
ctttgatgcc tttattgatt caacacatgc ttattatatg cttgctgtgt gccgggcccc  
60  
agaccaggcg ctggagacac agcagtga aa atactaacat tgtttctgcc ctcacggagc  
120  
tcacagtgtg acagggagac aaatagacct gtcagtagat aacatgaaaa taattggact  
180  
atgtgctgca gacacaatat cccaggtcta tgagaatgtc aatacagact tcacgtggga  
240  
aatggtgagg caataaggat cgtttccctt gatgaaatgg agcttgcaga agaaggcagg  
300  
gtcagttgtg gggagctctg gttggagggtg gagggagtgc attccaagct ggaggagctg  
360  
tccagggttc tggagactaa acggagcccc ctgggaactg tcctgagccc cggtgctgaa  
420  
acagatcgcg gttctcttct cggacctccc gagaagcgct gtccggatat ttggtgctcc  
480  
caagcagtca gccctgctgg tctctgcttt ccagaccggc aaacttcgcc gtctctgtcc  
540  
ctttctggga aaatggc  
557

<210> 5174  
<211> 93  
<212> PRT



<213> Homo sapiens

<400> 5174

```

Met Glu Leu Ala Glu Glu Gly Arg Val Ser Cys Gly Glu Leu Trp Leu
 1           5           10           15
Glu Val Glu Gly Val His Ser Lys Leu Glu Glu Leu Ser Arg Val Leu
 20           25           30
Glu Thr Lys Arg Ser Pro Leu Gly Thr Val Leu Ser Pro Gly Ala Glu
 35           40           45
Thr Asp Arg Gly Ser Leu Leu Gly Pro Pro Glu Lys Arg Cys Pro Asp
 50           55           60
Ile Trp Cys Ser Gln Ala Val Ser Pro Ala Gly Leu Cys Phe Pro Asp
 65           70           75           80
Arg Gln Thr Ser Pro Ser Leu Ser Leu Ser Gly Lys Met
           85           90

```

<210> 5175

<211> 272

<212> DNA

<213> Homo sapiens

<400> 5175

```

ccatggcagc tccagagacc aggtggaggg gaaatcaccc cacgctcccg agcagagagc
60
ttcggagcca gccagcctca ctgtgctggtg cccacaacag ctgtctccat gtgtcacgtg
120
agggctgccc aacaccaggt agggcagcaa cgcccacgcc ctgcccgggc acagcctccc
180
agaggtcact gccatgccgc actgaccgga gagagggcag tggtagagagg tgcattgccac
240
cccaggcttg ttccgaaggc cennnnnncc nc
272

```

<210> 5176

<211> 90

<212> PRT

<213> Homo sapiens

<400> 5176

```

Met Ala Ala Pro Glu Thr Arg Trp Arg Gly Asn His Pro Thr Leu Pro
 1           5           10           15
Ser Arg Glu Leu Arg Ser Gln Pro Ala Ser Leu Cys Val Ala His Asn
 20           25           30
Ser Cys Leu His Val Ser Arg Glu Gly Cys Pro Thr Pro Gly Arg Ala
 35           40           45
Ala Thr Pro Thr Pro Ser Pro Gly Thr Ala Ser Gln Arg Ser Leu Pro
 50           55           60
Cys Arg Thr Asp Arg Arg Glu Gly Ser Gly Glu Arg Cys Met Pro Pro
 65           70           75           80
Gln Ala Cys Ser Glu Gly Pro Xaa Xaa Xaa
           85           90

```

<210> 5177

<211> 637

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5177

```

ntcctagtga gtatcgagtt ggtcttatta tcgctgaac tgggagcctt tgtttcctgc
60
gtgtcgagg aagtgacgtt tcgggtacag ccgctaccag agtccctttc tcgcgaggcg
120
gaagaacccc gatcgctgag gagcaagggg gcgctaggaa agggaaactgg gttgcgacgg
180
tccggcgaga gagagctggg gtgctggggg gcggggaagt tggggagcag aggccgcttg
240
gtgtccgagt agggtaagac cgcaccgacc cagtccgtta ggaaagaagg gaaacgaggc
300
aattgtcggg cggatccccg gacggagggc taaggttgtg tggaaggcgc tgctccccgg
360
atggcgaccg cagatactcc ggccccggcc tccagtggcc tctcgccgaa ggaagaaggg
420
gagcttgaag atggggaaat cagtgcgac gataataaca gccagatacg ggtcggagc
480
agcagcagca gcagcgggcg cgggctgtta ccctatccgc ggcgaaggcc tcctcactcg
540
gcccggggcg gtggatctgg cggaggcggt ggctcttctt cgtcatcgtc ctcttctcag
600
cagcagctga ggaatttctc acgctcgcgg cacgcgt
637

```

&lt;210&gt; 5178

&lt;211&gt; 92

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5178

```

Met Ala Thr Ala Asp Thr Pro Ala Pro Ala Ser Ser Gly Leu Ser Pro
1           5           10           15
Lys Glu Glu Gly Glu Leu Glu Asp Gly Glu Ile Ser Asp Asp Asp Asn
20          25          30
Asn Ser Gln Ile Arg Ser Arg Ser Ser Ser Ser Ser Gly Gly Gly
35          40          45
Leu Leu Pro Tyr Pro Arg Arg Arg Pro Pro His Ser Ala Arg Gly Gly
50          55          60
Gly Ser Gly Gly Gly Gly Gly Ser Ser Ser Ser Ser Ser Ser Ser Gln
65          70          75          80
Gln Gln Leu Arg Asn Phe Ser Arg Ser Arg His Ala
85          90

```

&lt;210&gt; 5179

&lt;211&gt; 1527

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5179

```

ggaacacagg ccatgccgcc tcctctctct tgggattacc accagtgcac ctggaactat
60

```

gaagttgagc cggatgtaaa agcagtggat gcagggtttg atgggcatga cattccttat  
120  
gatgccatgt ggctggacat agagcacact gagggcaaga ggtacttcac ctgggacaaa  
180  
aacagattcc ctaaccccaa gaggatgcaa gagctgctca ggaacaaaaa gcgtaagctt  
240  
gtggatcatca gtgatcccca catcaagatt gaacctgact actcagtata tgtgaaggcc  
300  
aaagatcagg gcttctttgt gaagaatcag gaaggggaag actttgaagg ggtgtgttgg  
360  
ccaggtctct cctcttacct ggatttcacc aatcccaagg tcagagagtg gtattcaagt  
420  
ctttttgctt tccctgttta tcagggatct acggacatcc tcttcctttg gaatgacatg  
480  
aatgagcctt ctgtcttttag agggccagag caaacatgc agaagaatgc cattcatcat  
540  
ggcaattggg agcacagaga gctccacaac atctacgggt tttatcatca aatggctact  
600  
gcagaaggac tgataaaacg atctaaaggg aaggagagac cctttgttct tacacgttct  
660  
ttctttgctg gatcacaaaa gtatgggtgcc gtgtggacag gcgacaacac agcagaatgg  
720  
agcaacttga aaatttctat cccaatgtta ctactctca gcattactgg gatctctttt  
780  
tgcgagctg acataggcgg gttcattggg aatccagaga cagagctgct agtgcgttgg  
840  
taccaggctg gagcctacca gcccttcttc cgtggccatg ccaccatgaa caccaagcga  
900  
cgagagccct ggctcttttg ggaggaacac acccgactca tccgagaagc catcagagag  
960  
cgctatggcc tcctgccata ttggtattct ctgttctacc atgcacacgt ggcttcccaa  
1020  
cctgtcatga ggctctgtg ggtagagttc cctgatgaac taaagacttt tgatatggaa  
1080  
gatgaataca tgctggggag tgcattattg gttcatccag tcacagaacc aaaagccacc  
1140  
acagttgatg tgtttcttcc aggatcaa at gaggtctgg atgactataa gacatttgct  
1200  
cattgggaag gaggggtgtac tgtaaagatc ccagtagcct tggacactat tccagtgttt  
1260  
cagcgaggtg gaagtgtgat accaataaag acaactgtag gaaaatccac aggctggatg  
1320  
actgaatcct cctagggact ccgggttget ctaagcacta agggttcttc agtgggtgag  
1380  
ttatatcttg atgatggcca ttcattccaa tacctccacc agaagcaatt tttgcacagg  
1440  
aagttttcat tctgttccag tgttctgac aatagttttg ctgaccagag gggtcattat  
1500  
cccagcaagt gtgtggtgga gaagatc  
1527

&lt;210&gt; 5180

&lt;211&gt; 444

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5180

Gly Thr Gln Ala Met Pro Pro Pro Leu Ser Trp Asp Tyr His Gln Cys  
 1 5 10 15  
 Thr Trp Asn Tyr Glu Val Glu Pro Asp Val Lys Ala Val Asp Ala Gly  
 20 25 30  
 Phe Asp Gly His Asp Ile Pro Tyr Asp Ala Met Trp Leu Asp Ile Glu  
 35 40 45  
 His Thr Glu Gly Lys Arg Tyr Phe Thr Trp Asp Lys Asn Arg Phe Pro  
 50 55 60  
 Asn Pro Lys Arg Met Gln Glu Leu Leu Arg Asn Lys Lys Arg Lys Leu  
 65 70 75 80  
 Val Val Ile Ser Asp Pro His Ile Lys Ile Glu Pro Asp Tyr Ser Val  
 85 90 95  
 Tyr Val Lys Ala Lys Asp Gln Gly Phe Phe Val Lys Asn Gln Glu Gly  
 100 105 110  
 Glu Asp Phe Glu Gly Val Cys Trp Pro Gly Leu Ser Ser Tyr Leu Asp  
 115 120 125  
 Phe Thr Asn Pro Lys Val Arg Glu Trp Tyr Ser Ser Leu Phe Ala Phe  
 130 135 140  
 Pro Val Tyr Gln Gly Ser Thr Asp Ile Leu Phe Leu Trp Asn Asp Met  
 145 150 155 160  
 Asn Glu Pro Ser Val Phe Arg Gly Pro Glu Gln Thr Met Gln Lys Asn  
 165 170 175  
 Ala Ile His His Gly Asn Trp Glu His Arg Glu Leu His Asn Ile Tyr  
 180 185 190  
 Gly Phe Tyr His Gln Met Ala Thr Ala Glu Gly Leu Ile Lys Arg Ser  
 195 200 205  
 Lys Gly Lys Glu Arg Pro Phe Val Leu Thr Arg Ser Phe Phe Ala Gly  
 210 215 220  
 Ser Gln Lys Tyr Gly Ala Val Trp Thr Gly Asp Asn Thr Ala Glu Trp  
 225 230 235 240  
 Ser Asn Leu Lys Ile Ser Ile Pro Met Leu Leu Thr Leu Ser Ile Thr  
 245 250 255  
 Gly Ile Ser Phe Cys Gly Ala Asp Ile Gly Gly Phe Ile Gly Asn Pro  
 260 265 270  
 Glu Thr Glu Leu Leu Val Arg Trp Tyr Gln Ala Gly Ala Tyr Gln Pro  
 275 280 285  
 Phe Phe Arg Gly His Ala Thr Met Asn Thr Lys Arg Arg Glu Pro Trp  
 290 295 300  
 Leu Phe Gly Glu Glu His Thr Arg Leu Ile Arg Glu Ala Ile Arg Glu  
 305 310 315 320  
 Arg Tyr Gly Leu Leu Pro Tyr Trp Tyr Ser Leu Phe Tyr His Ala His  
 325 330 335  
 Val Ala Ser Gln Pro Val Met Arg Pro Leu Trp Val Glu Phe Pro Asp  
 340 345 350  
 Glu Leu Lys Thr Phe Asp Met Glu Asp Glu Tyr Met Leu Gly Ser Ala  
 355 360 365  
 Leu Leu Val His Pro Val Thr Glu Pro Lys Ala Thr Thr Val Asp Val  
 370 375 380  
 Phe Leu Pro Gly Ser Asn Glu Val Trp Tyr Asp Tyr Lys Thr Phe Ala  
 385 390 395 400  
 His Trp Glu Gly Gly Cys Thr Val Lys Ile Pro Val Ala Leu Asp Thr

	405		410		415										
Ile	Pro	Val	Phe	Gln	Arg	Gly	Gly	Ser	Val	Ile	Pro	Ile	Lys	Thr	Thr
	420							425					430		
Val	Gly	Lys	Ser	Thr	Gly	Trp	Met	Thr	Glu	Ser	Ser				
	435						440								

<210> 5181  
 <211> 4961  
 <212> DNA  
 <213> Homo sapiens

<400> 5181  
 acgcgtgcag gtggcagagc acccaggcct tgaggccag gaagcatcat tcccagagct  
 60  
 gccagagcag tggccctgga aaatatggaa gcagctgtca gccatggccc agggcctgag  
 120  
 cgtatgattc tcaggaaaag tgggcaggat atctgactgt caggtgtgcc ggcagaaggt  
 180  
 tctggcctct tcctgggaaa agccctttta gagtttgtcc tctcacttct ggagaagatg  
 240  
 cagacacagg agatcctgag gatactgcga ctgcctgagc taggtgactt gggacagttt  
 300  
 ttccgcagcc tctcggccac caccctcgtg agtatgggtg ccctggctgc catccttgcc  
 360  
 tactggttca ctcaccggcc aaaggccttg caaccacat gcaacctcct gatgcagtcg  
 420  
 gaagaagtag aggacagtgg cggggcacgg cgatctgtga ttgggtctgg ccctcaattg  
 480  
 cttaccatt actatgatga tgcccggacc atgtaccagg tgttccgccg tgggcttagc  
 540  
 atctcaggga atgggccctg tcttggtttc aggaagccta agcagcctta ccagtggctg  
 600  
 tcctaccagg aggtggccga cagggtgaa tttctgggt cggacttct ccagcacaat  
 660  
 tgtaaagcat gcactgatca gtttattggt gtttttgac aaaatcggcc agagtggatc  
 720  
 attgtggagc tggcctgcta cacatatcc atggtggtg tcccgtcta tgacaccctg  
 780  
 ggccctgggg ctatccgcta catcatcaat acagcggaca tcagcaccgt gattgtggac  
 840  
 aaacctcaga aggctgtgct tctgctagag catgtggaga ggaaggagac tccaggcctc  
 900  
 aagctgatca tcctcatgga ccatttcgaa gaagccctga aagagagagg gcagaagtgc  
 960  
 ggggtggtca ttaagtccat gcaggccgtg gaggactgtg gccaagagaa tcaccaggct  
 1020  
 cctgtgcccc cgcagcctga tgacctctcc attgtgtgtt tcacaagcgg cagcagagg  
 1080  
 aacccaaaag gtgcgatgct caccatggg aacgtggtg ctgatttctc aggttttctg  
 1140  
 aaagtacag agagtacgtg ggctccact tgtgcggatg tgcacatttc ctatttgcct  
 1200  
 ttagcacaca tgtttgagcg aatggtgcag tctgtcgtct attgccacgg agggcgtgtt  
 1260

ggcttcttcc agggagatat ccgccttctc tcagatgaca tgaaggctct atgccccacc  
1320  
atcttccctg tgggtcccacg actgctgaac cggatgtacg acaagatctt cagccaggca  
1380  
aacacaccat taaagcgctg gctcctggag tttgcagcaa agcgtaagca agccgaggtc  
1440  
cggagtggaa tcatcaggaa tgatagtatc tgggatgaac tcttctttaa taagattcag  
1500  
gccagtcttg gtgggtgtgt gcggatgatt gttactggag cagccccagc atcaccaaca  
1560  
gttctgggat ttctccgggc agctctaggg tgccaggttt atgaaggtta tggccaaact  
1620  
gagtgcacag ctggatgtac cttcaccact cctggcgact ggacctcagg gcacgtaggg  
1680  
gcgccacttc cctgcaatca tatcaagctc gttgatgttg aggaactgaa ctactgggcc  
1740  
tgcaaaggag agggagagat atgtgtgaga ggaccaaagtg tgttcaaagg ctacttgaaa  
1800  
gatccagaca ggacgaagga ggccttgac agcgatggct ggcttcacac tggagacatc  
1860  
ggaaaatggc tgccggcagg aactctttaa attattgatc ggaaaaagca tatattttaa  
1920  
cttgctcagg gagaatatgt tgcacccgag aagattgaga acatctacat ccggagccaa  
1980  
cctgtggcgc aaatctatgt ccatggggac agcttaaagg ccttttttgt aggcattgtt  
2040  
gtgcctgacc ctgaagttat gccctcctgg gcccagaaga gaggaattga aggaacatat  
2100  
gcagatctct gcacaaataa ggatctgaag aaagccattt tggaagatat ggtgaggtta  
2160  
ggaaaagaaa gtggactcca ttcttttgag caggttaaag ccattcacat ccattctgac  
2220  
atgttctcag ttcaaatgg cttgctgaca ccaacactaa aagctaagag acctgagctg  
2280  
agagagtact tcaaaaaaca aatagaagag ctttactcaa tctccatgtg aagttcaagg  
2340  
aaagttcttc tcagtgtaat gaactgtcta gcaatattat agttattctt gaaagtaatg  
2400  
agtcaaatg acacagctga aaatgaataa gcatctgatt ttatgactga gccttttctt  
2460  
gtcccaagag gtctttaaca atattttctc tatcatcaat gagtatattt tatttttatt  
2520  
ataaaaatga tattgtgggtg gactgctaaa aatatcacia atggcaatgt aaaaatcaag  
2580  
acattttctc aagaactgtg taccactaaa agtaatatat tgtcaatgtt cacagaacta  
2640  
ttaaacataa aggaaaaaca taagtatat attctactta attatttgtg aatcagtaac  
2700  
cagatgcagc aaatatctag gcaatgtgga ctacctcatt cagtaactga ttgtcaaat  
2760  
cacaattaaa tcagacttca aaaattaaag ctagggtgat agaatcatgc taaaagaaaa  
2820  
catgataact catagtctac gtaacttcag agtcttttaa catgacaatc cacattgtca  
2880

tatgtgaaaa ttttctctct gatttttact ttcattcatg aaaaatgaaa attcagaaat  
2940  
tctttttttc ctttttggtt tgagacgggg tctgctctgt cacctaggct ggagtgcagt  
3000  
ggcttaatca tggctcattg cagtctccat ctctgggct cgagtgatcc tctgtctca  
3060  
cctcccgagt agctgagact acagtacagg cgcagccac cacacctggc taatagaaat  
3120  
ttttttttta gagattttgc tcaggctggt ctcaaactcc tgagctcaag ggatcctccc  
3180  
gccttggcct ccctagggtg tgggattgca ggcatgagcc attgttccca gccaaattca  
3240  
gatattatta aaacacatgt catatttata tagtaactta caaagacctt tcaatacatt  
3300  
ttctcattta ttaagctcat taaagtattc aggaactacc tagaaaaaat ataatgtaaa  
3360  
actattcaag gatagtgtgt gtatgttcat ggacttttta ttataatgaa ttctaaaaga  
3420  
catctgttga ctctacaatg aatggatcct tgaggaatac ttgggagaag aaactcagag  
3480  
ttatttctca ggataggcag caattaatgt acctacattc cttgctgggg tcttctagtc  
3540  
ttccattccc aatgtgccc tgctatgcct ggaaacccta tatggttgta attctgaaca  
3600  
atttcacttt ttttccagta agaatatcaa ggcagaagggt gggaaggagg ggacattatt  
3660  
tccagggaaa atagtttttc aacaatataa ctttgataaa cctctttaaa atgccccaaag  
3720  
aaaacttttt aagtccatag acaaagaaat actgcctaata ggcataatta cattcctaaa  
3780  
atctttaagc gtgccgaagt ttaaccacta aaacctcctt tcttgcatca tgtatttaga  
3840  
tgcacctgt attgggggtgt caacaatttc ttataattaa aggccagata ccatggacag  
3900  
caattaagtt ccaagctata gattgtgcct ctgaaaaagg catggacccc aggaacgtgt  
3960  
ttttcttctg tagagacaag actctaaaag catatcaaca atccatatgc aattcatgtg  
4020  
ttaatttaaa atgtatgtgc tcagtgtttg tagtctagaa gtcctttcc cttggaggaa  
4080  
tgccaagcag tttgcaaaaa taaatgctgt tagttaaaaa ccacataatc acatgggcct  
4140  
actgaataaa tatgcatcag tgattatata cttatatttc agtcttgta aaagtgaatc  
4200  
actgtttcat ttgatgtatt taccagtcct ttttatccag ttttcttgg gcatattctc  
4260  
tctgaagacc cactgttgca cttctaaatt tgacagttaa gaaatgagct agttctatac  
4320  
acactgattt ttaaaggcgt ttctgaataa actaatactt aaaatgtcca aagtcacatc  
4380  
tgtacagcat tagattttta tatttaatat atatttgact aattaaaagt gaaagtgtt  
4440  
acctgaactg gatattcata ctattttaag ggcaagttgc ttacatttca ataacaacaa  
4500

aaaaagaatc tgtttcccat tgtcctccta ctcaactaaa attcatagtt ggctttaagc  
 4560  
 ccaaaagaat tttgaacaat gtgacagaaa caagtaatgt aaaacttatt ttgttttatt  
 4620  
 tatactttat aatagttaga tataacagat tatggacaac ttaatatattc ttctttttgg  
 4680  
 ctggggcgagg tggctcatgc ctgtggtccc ggcactttgg gagggcgagg cgggcagatc  
 4740  
 acgaggtcag gagatcgaga ccatectggc taacacagtg aaaccccgtc tctactaaaa  
 4800  
 gaatacaaaa aattagccgg gcgttggtggc gggcgccctgt agtcccagct actcgggagg  
 4860  
 ctgagggcagg ggaatggcat gagcctggga ggcggagctt gcagtgagcc gagatcccgc  
 4920  
 cactgtactc cagcctgggc aacagaacga gactccgtct c  
 4961

<210> 5182  
 <211> 697  
 <212> PRT  
 <213> Homo sapiens

<400> 5182  
 Met Gln Thr Gln Glu Ile Leu Arg Ile Leu Arg Leu Pro Glu Leu Gly  
 1 5 10 15  
 Asp Leu Gly Gln Phe Phe Arg Ser Leu Ser Ala Thr Thr Leu Val Ser  
 20 25 30  
 Met Gly Ala Leu Ala Ala Ile Leu Ala Tyr Trp Phe Thr His Arg Pro  
 35 40 45  
 Lys Ala Leu Gln Pro Pro Cys Asn Leu Leu Met Gln Ser Glu Glu Val  
 50 55 60  
 Glu Asp Ser Gly Gly Ala Arg Arg Ser Val Ile Gly Ser Gly Pro Gln  
 65 70 75 80  
 Leu Leu Thr His Tyr Tyr Asp Asp Ala Arg Thr Met Tyr Gln Val Phe  
 85 90 95  
 Arg Arg Gly Leu Ser Ile Ser Gly Asn Gly Pro Cys Leu Gly Phe Arg  
 100 105 110  
 Lys Pro Lys Gln Pro Tyr Gln Trp Leu Ser Tyr Gln Glu Val Ala Asp  
 115 120 125  
 Arg Ala Glu Phe Leu Gly Ser Gly Leu Leu Gln His Asn Cys Lys Ala  
 130 135 140  
 Cys Thr Asp Gln Phe Ile Gly Val Phe Ala Gln Asn Arg Pro Glu Trp  
 145 150 155 160  
 Ile Ile Val Glu Leu Ala Cys Tyr Thr Tyr Ser Met Val Val Val Pro  
 165 170 175  
 Leu Tyr Asp Thr Leu Gly Pro Gly Ala Ile Arg Tyr Ile Ile Asn Thr  
 180 185 190  
 Ala Asp Ile Ser Thr Val Ile Val Asp Lys Pro Gln Lys Ala Val Leu  
 195 200 205  
 Leu Leu Glu His Val Glu Arg Lys Glu Thr Pro Gly Leu Lys Leu Ile  
 210 215 220  
 Ile Leu Met Asp Pro Phe Glu Glu Ala Leu Lys Glu Arg Gly Gln Lys  
 225 230 235 240  
 Cys Gly Val Val Ile Lys Ser Met Gln Ala Val Glu Asp Cys Gly Gln



													245			250			255		
Glu	Asn	His	Gln	Ala	Pro	Val	Pro	Pro	Gln	Pro	Asp	Asp	Leu	Ser	Ile						
				260				265					270								
Val	Cys	Phe	Thr	Ser	Gly	Thr	Thr	Gly	Asn	Pro	Lys	Gly	Ala	Met	Leu						
				275				280				285									
Thr	His	Gly	Asn	Val	Val	Ala	Asp	Phe	Ser	Gly	Phe	Leu	Lys	Val	Thr						
				290			295				300										
Glu	Ser	Gln	Trp	Ala	Pro	Thr	Cys	Ala	Asp	Val	His	Ile	Ser	Tyr	Leu						
305					310					315					320						
Pro	Leu	Ala	His	Met	Phe	Glu	Arg	Met	Val	Gln	Ser	Val	Val	Tyr	Cys						
				325					330						335						
His	Gly	Gly	Arg	Val	Gly	Phe	Phe	Gln	Gly	Asp	Ile	Arg	Leu	Leu	Ser						
				340				345					350								
Asp	Asp	Met	Lys	Ala	Leu	Cys	Pro	Thr	Ile	Phe	Pro	Val	Val	Pro	Arg						
				355			360					365									
Leu	Leu	Asn	Arg	Met	Tyr	Asp	Lys	Ile	Phe	Ser	Gln	Ala	Asn	Thr	Pro						
				370		375					380										
Leu	Lys	Arg	Trp	Leu	Leu	Glu	Phe	Ala	Ala	Lys	Arg	Lys	Gln	Ala	Glu						
385					390					395					400						
Val	Arg	Ser	Gly	Ile	Ile	Arg	Asn	Asp	Ser	Ile	Trp	Asp	Glu	Leu	Phe						
				405				410						415							
Phe	Asn	Lys	Ile	Gln	Ala	Ser	Leu	Gly	Gly	Cys	Val	Arg	Met	Ile	Val						
				420				425					430								
Thr	Gly	Ala	Ala	Pro	Ala	Ser	Pro	Thr	Val	Leu	Gly	Phe	Leu	Arg	Ala						
				435			440					445									
Ala	Leu	Gly	Cys	Gln	Val	Tyr	Glu	Gly	Tyr	Gly	Gln	Thr	Glu	Cys	Thr						
				450		455					460										
Ala	Gly	Cys	Thr	Phe	Thr	Thr	Pro	Gly	Asp	Trp	Thr	Ser	Gly	His	Val						
465					470					475					480						
Gly	Ala	Pro	Leu	Pro	Cys	Asn	His	Ile	Lys	Leu	Val	Asp	Val	Glu	Glu						
				485				490						495							
Leu	Asn	Tyr	Trp	Ala	Cys	Lys	Gly	Glu	Gly	Glu	Ile	Cys	Val	Arg	Gly						
				500			505						510								
Pro	Asn	Val	Phe	Lys	Gly	Tyr	Leu	Lys	Asp	Pro	Asp	Arg	Thr	Lys	Glu						
				515			520					525									
Ala	Leu	Asp	Ser	Asp	Gly	Trp	Leu	His	Thr	Gly	Asp	Ile	Gly	Lys	Trp						
				530		535					540										
Leu	Pro	Ala	Gly	Thr	Leu	Lys	Ile	Ile	Asp	Arg	Lys	Lys	His	Ile	Phe						
545					550					555					560						
Lys	Leu	Ala	Gln	Gly	Glu	Tyr	Val	Ala	Pro	Glu	Lys	Ile	Glu	Asn	Ile						
				565				570						575							
Tyr	Ile	Arg	Ser	Gln	Pro	Val	Ala	Gln	Ile	Tyr	Val	His	Gly	Asp	Ser						
				580				585					590								
Leu	Lys	Ala	Phe	Leu	Val	Gly	Ile	Val	Val	Pro	Asp	Pro	Glu	Val	Met						
				595			600					605									

675 680 685  
Ile Glu Glu Leu Tyr Ser Ile Ser Met  
690 695

<210> 5183  
<211> 2466  
<212> DNA  
<213> Homo sapiens

<400> 5183  
nngtgcacgt gcccaatgga tgcggcggcg aagggccgct cctcgaagta ttccaacttg  
60  
tcccgccagt tggggcccag gtcgttggtg agagttttca tcatctgctt cagtggcatg  
120  
agcctgcgct ccgaggaccc ctcagggaag aaggccgtgc tgggttccag tcctttcctg  
180  
tccgaggcca atgcagagcg gatcgtgcgc acgctctgca aggtgcgtgg tgcggcactc  
240  
aagctgggcc agatgctgag catccaggat gatgccttta tcaaccccca cctggctaag  
300  
atcttcgagc ggggtgcggca gagcgcggac ttcatgccac tgaagcagat gatgaaaact  
360  
ctcaacaacg acctgggccc caactggcgg gacaagttgg aatacttcga ggagcggccc  
420  
ttcgccgccc catccattgg gcaggcgcac ttggcccga tgaagggcgg ccgcgaggtg  
480  
gccatgaaga tccagtaccc tggcgtggcc cagagcatca acagtgatgt caacaacctc  
540  
atggcctgtg tgaacatgag caacatgctt ccagaaggcc tgttccccga gcacctgatc  
600  
gacgtgctga ggcgggagct ggccctggag tgtgactacc agcgagaggc cgcctgtgcc  
660  
cgcaagttca gggacctgct gaagggccac cccttcttct atgtgcctga gattgtggat  
720  
gagctctgca gccacatgt gctgaccaca gagctggtgt ctggcttccc cctggaccag  
780  
gccgaagggc tcagccagga gattcggaac gagatctgct acaacatcct ggttctgtgc  
840  
ctgagggagc tgtttgagtt ccacttcatg caaacagacc ccaactggtc caacttcttc  
900  
tatgaccccc agcagcaciaa ggtggctctt ttggattttg gggcaacgcg ggaatatgac  
960  
agatccttca ccgacctcta cattcagatc atcagggtctg ctgccgacag ggacaggag  
1020  
actgtgcggg cgaaatccat agagatgaag ttccctcaccg gctacgaggt caaggatcatg  
1080  
gaagacgccc acttggtatgc catcctcatc ctgggggagg ccttcgcctc cgatgagcct  
1140  
tttgattttg gcaactcagag caccaccgag aagatccaca acctgattcc cgtcatgctg  
1200  
aggcacgctc tcgtcccccc acccgaggaa acctactccc tgcacaggaa gatggggggc  
1260  
tccttctca tctgctccaa gctgaaggcc cgcttcccct gcaaggccat gttcgaggag  
1320

gcctacagca actactgcaa gaggcaggcc cagcagtagg gctgcggggc acgcccaggc  
 1380  
 cggctccgcg ggaactctct ccctcagaca ggccaaaaac cagtagcgag gtcgtggtga  
 1440  
 tgctcttttt aactcctttg cccaataagg ggggtggctg cctggagccc cgtagccagc  
 1500  
 gctttccacg gtttctgttg ctaaattggt gtagggtagg aagtgaaga atgaagatga  
 1560  
 agccccactg ctcggtcagt ctgcctccgt gtgtcctctg aaataagcag atgaagatga  
 1620  
 aagggaact ttgttttctt ctttttcctg atgtgaatgt taagcagaag ggagagagtc  
 1680  
 cttactccct tccaatctct gttcagtgca aaaccagaa acatgaacag atacgattgt  
 1740  
 gggattttta tcatctgtgt agtaggtgtg tgtatgtgtt tctagagtga gatttgtgtt  
 1800  
 ttctgccctt ttcctctcca gccgatgggc tggagctggg agaggtgctg agctaacagt  
 1860  
 gccacaagt gtccttaag cctgcgaggc ccaggcctgt ggggctggtt ctcacctttg  
 1920  
 acagctgaat gttcctaaag aactgctgcc ccacagtga ggtgggagca gcggaacagg  
 1980  
 gaatgccaga cacaggctcg ctgctgctgg aaggcggggt gggacttctt tcctctgtcc  
 2040  
 ggagaggcac aggtgtcacc agttccagcc aaaggctcct cacaggcgct gtgaattttt  
 2100  
 gtacaagtct tgtaattatc gaatcaacaa cttgtttcaa tttaataaaa atgctcatgg  
 2160  
 gaaggcgggc gcggaggcgg ctagaagggt accgcggatc ccagcttctt gcagtcagcc  
 2220  
 ctgaaggatg gctgccatat tgggagacac catcatgggt gctaaaggcc ttgtcaagct  
 2280  
 gacctctgcg ctccgaggac ccctcaggga agaaggcctg gctgggttcc agtcctttcc  
 2340  
 tgtccgaggc caatgcagag cggatcgtgc gcacgctctg caaggtgcgt ggtgcggcac  
 2400  
 tcaagctggg ccagatgctg agcatccagg atgatgcctt tatcaacccc cacctggcta  
 2460  
 agatct  
 2466

&lt;210&gt; 5184

&lt;211&gt; 395

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5184

Pro	Phe	Leu	Ser	Glu	Ala	Asn	Ala	Glu	Arg	Ile	Val	Arg	Thr	Leu	Cys
1				5				10						15	
Lys	Val	Arg	Gly	Ala	Ala	Leu	Lys	Leu	Gly	Gln	Met	Leu	Ser	Ile	Gln
		20						25					30		
Asp	Asp	Ala	Phe	Ile	Asn	Pro	His	Leu	Ala	Lys	Ile	Phe	Glu	Arg	Val
	35					40					45				
Arg	Gln	Ser	Ala	Asp	Phe	Met	Pro	Leu	Lys	Gln	Met	Met	Lys	Thr	Leu

```

      50      55      60
Asn Asn Asp Leu Gly Pro Asn Trp Arg Asp Lys Leu Glu Tyr Phe Glu
65      70      75      80
Glu Arg Pro Phe Ala Ala Ala Ser Ile Gly Gln Val His Leu Ala Arg
      85      90      95
Met Lys Gly Gly Arg Glu Val Ala Met Lys Ile Gln Tyr Pro Gly Val
      100      105      110
Ala Gln Ser Ile Asn Ser Asp Val Asn Asn Leu Met Ala Val Leu Asn
      115      120      125
Met Ser Asn Met Leu Pro Glu Gly Leu Phe Pro Glu His Leu Ile Asp
      130      135      140
Val Leu Arg Arg Glu Leu Ala Leu Glu Cys Asp Tyr Gln Arg Glu Ala
145      150      155      160
Ala Cys Ala Arg Lys Phe Arg Asp Leu Leu Lys Gly His Pro Phe Phe
      165      170      175
Tyr Val Pro Glu Ile Val Asp Glu Leu Cys Ser Pro His Val Leu Thr
      180      185      190
Thr Glu Leu Val Ser Gly Phe Pro Leu Asp Gln Ala Glu Gly Leu Ser
      195      200      205
Gln Glu Ile Arg Asn Glu Ile Cys Tyr Asn Ile Leu Val Leu Cys Leu
      210      215      220
Arg Glu Leu Phe Glu Phe His Phe Met Gln Thr Asp Pro Asn Trp Ser
225      230      235      240
Asn Phe Phe Tyr Asp Pro Gln Gln His Lys Val Ala Leu Leu Asp Phe
      245      250      255
Gly Ala Thr Arg Glu Tyr Asp Arg Ser Phe Thr Asp Leu Tyr Ile Gln
      260      265      270
Ile Ile Arg Ala Ala Ala Asp Arg Asp Arg Glu Thr Val Arg Ala Lys
      275      280      285
Ser Ile Glu Met Lys Phe Leu Thr Gly Tyr Glu Val Lys Val Met Glu
      290      295      300
Asp Ala His Leu Asp Ala Ile Leu Ile Leu Gly Glu Ala Phe Ala Ser
305      310      315      320
Asp Glu Pro Phe Asp Phe Gly Thr Gln Ser Thr Thr Glu Lys Ile His
      325      330      335
Asn Leu Ile Pro Val Met Leu Arg His Arg Leu Val Pro Pro Pro Glu
      340      345      350
Glu Thr Tyr Ser Leu His Arg Lys Met Gly Gly Ser Phe Leu Ile Cys
      355      360      365
Ser Lys Leu Lys Ala Arg Phe Pro Cys Lys Ala Met Phe Glu Glu Ala
      370      375      380
Tyr Ser Asn Tyr Cys Lys Arg Gln Ala Gln Gln
385      390      395

```

&lt;210&gt; 5185

&lt;211&gt; 1657

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5185

gtgcactcac agaactctgct gcttcccagg tcttttggat gtgaaatgaa accccaagga

60

ctgctttaac aaggggcaaa aacacatgca accaaagcca gcagttatgc cgaagcatcc

120

cggattccca tgagaaactc tctggatcta gttcctctac gtcacatgag tgtgcaaaca  
180  
ggagactaca agagttttaa aatactggga ctgctggaga tttccctggc catatatagt  
240  
tcacttggtt cacagatctc actctgtcac ccaggctgga gtacagtggc gcatctcaa  
300  
cttactgcaa cctccgctc ccggttcaag cgattcgcct gcctctgcct tagctatgtc  
360  
cctttcagaa aaattctact tcaagagaag atttggtttc aggatgtctc ctggactgga  
420  
gggcatgtac ctagagtccc acgaactggc tgggtataca gaaatgtcca gaggccggag  
480  
agcgtttcag atcacatgta ccggatggca gttatggcta tggatgatcaa agatgaccgt  
540  
cttaacaaag acncggaagc tatgaagcag ataaccagc tcctaccaga ggacctcaga  
600  
aaggagctct atgaactttg ggaagagtac gagacccaat ctagtgcaga agccaaattt  
660  
gtgaagcagc tagaccaatg tgaaatgatt cttcaagcat ctgaatatga agacctgaa  
720  
cacaaacctg ggagactgca agacttctat gattccacag caggaaaatt caatcacctc  
780  
gagatagtcc agcttggttc tgaacttgag gcagaaagaa gcactaacat agctgcagct  
840  
gccagtgagc cacactcctg agacactctc taaattgctg cactcctgta acaaacatta  
900  
ttttccatt tcattgtatt gtgttttgcc attgttggtc tgttgatttc cctagatgtg  
960  
agtctgtttg ttttcaattg tctgaacttc agcaagaaat gtgatacaac ttgggcacta  
1020  
aaagaagcca cagaacagga agcggctcatg aaagtgccat ggatgaacac tggaggtggc  
1080  
agtgcctgtt tatgaactaa ataaataaat attaaacacc taaaatatta gaatatttat  
1140  
tggagattta aaatcatctt attctgactt aattaccgat atccccgaag gctaggttca  
1200  
ttgaataata gaaaatttca ttatgattgc ttttaagaac agattcttca gctgatttag  
1260  
tgataagaat ccagaaaaga aaatgtacta gtgatgtatt ctctccccag atgaaattgc  
1320  
tgccttattc agatttactc tcttgagcca gattttgaat ttcactgcag actgcttcag  
1380  
acttctaate ataggcttgt aaacctacta ataggctctg cccctcttcc caatactttt  
1440  
tgtcatttag agatataaac cggggcatat aaaaatgcaa cttgtattcc tttgtatatt  
1500  
tttccctgtc tgacttataa atcttgagac ctttattgta aaagcattta tcatcagggtg  
1560  
agaaatataa ataggaactg gggtcattga gcctcaggta gggaatatat caaccgatt  
1620  
tcttccctctc ttttcccttt tataggataa ataatec  
1657

&lt;210&gt; 5186

<211> 243  
 <212> PRT  
 <213> Homo sapiens

<400> 5186  
 Met Arg Asn Ser Leu Asp Leu Val Pro Leu Arg His Met Ser Val Gln  
 1 5 10 15  
 Thr Gly Asp Tyr Lys Ser Leu Lys Ile Leu Gly Leu Leu Glu Ile Ser  
 20 25 30  
 Leu Ala Ile Tyr Ser Ser Leu Val Ser Gln Ile Ser Leu Cys His Pro  
 35 40 45  
 Gly Trp Ser Thr Val Val Arg Ser Gln Leu Thr Ala Thr Ser Ala Ser  
 50 55 60  
 Arg Phe Lys Arg Phe Ala Cys Leu Cys Leu Ser Tyr Val Pro Phe Arg  
 65 70 75 80  
 Lys Ile Leu Leu Gln Glu Lys Ile Trp Phe Gln Asp Val Ser Trp Thr  
 85 90 95  
 Gly Gly His Val Pro Arg Val Pro Arg Thr Gly Trp Val Tyr Arg Asn  
 100 105 110  
 Val Gln Arg Pro Glu Ser Val Ser Asp His Met Tyr Arg Met Ala Val  
 115 120 125  
 Met Ala Met Val Ile Lys Asp Asp Arg Leu Asn Lys Asp Xaa Glu Ala  
 130 135 140  
 Met Lys Gln Ile Thr Gln Leu Leu Pro Glu Asp Leu Arg Lys Glu Leu  
 145 150 155 160  
 Tyr Glu Leu Trp Glu Glu Tyr Glu Thr Gln Ser Ser Ala Glu Ala Lys  
 165 170 175  
 Phe Val Lys Gln Leu Asp Gln Cys Glu Met Ile Leu Gln Ala Ser Glu  
 180 185 190  
 Tyr Glu Asp Leu Glu His Lys Pro Gly Arg Leu Gln Asp Phe Tyr Asp  
 195 200 205  
 Ser Thr Ala Gly Lys Phe Asn His Pro Glu Ile Val Gln Leu Val Ser  
 210 215 220  
 Glu Leu Glu Ala Glu Arg Ser Thr Asn Ile Ala Ala Ala Ala Ser Glu  
 225 230 235 240  
 Pro His Ser

<210> 5187  
 <211> 1712  
 <212> DNA  
 <213> Homo sapiens

<400> 5187  
 nttttgtcctt gtcggctcct gtgtgtagga gggatttcgg cctgagagcg ggccgaggag  
 60  
 attggcgacg gtgtcgcccg tgttttcggtt ggcgggtgcc tgggctggtg ggaacagccg  
 120  
 cccgaaggaa gcacatgat ttcggccgcg cagttgttgg atgagttaat gggccgggac  
 180  
 cgaaacctag ccccgacga gaagcgcgc aacgtgcggt gggaccacga gagcgtttgt  
 240  
 aaatattatc tctgtggttt ttgtcctgcg gaattgttca caaatacacg ttctgatctt  
 300

ggtcctgtg aaaaaattca tgatgaaaat ctacgaaaac agtatgagaa gagctctcgt  
360  
ttcatgaaag ttggctatga gagagatttt ttgcgatact tacagagctt acttgcagaa  
420  
gtagaacgta ggatcagacg aggccatgct cgtttggcat tatctcaaaa ccagcagtct  
480  
tctggggccg ctggcccaac aggcaaaaat gaagaaaaaa ttcaggttct aacagacaaa  
540  
attgatgtac ttctgcaaca gattgaagaa ttagggctctg aaggaaaagt agaagaagcc  
600  
caggggatga tgaaattagt tgagcaatta aaagaagaga gagaactgct aaggtccaca  
660  
acgtcgacaa ttgaaagctt tgctgcacaa gaaaaacaaa tggaagtttg tgaagtatgt  
720  
ggagcctttt taatagtagg agatgcccg tcccgggtag atgaccattt gatgggaaaa  
780  
caacacatgg gctatgccaa aattaaagct actgtagaag aattaaaga aaagttaagg  
840  
aaaagaaccg aagaacctga tcgtgatgag cgtctaaaaa aggagaagca agaaagagaa  
900  
gaaagagaaa aagaacggga gagagaaaagg gaagaaagag aaaggaaaag acgaagggaa  
960  
gaggaagaaa gagaaaaaga aagggtctgt gacagagaaa gaagaaagag aagtcgttca  
1020  
cgaagtagac actcaagccg aacatcagac agaagatgca gcaggctctg ggaccacaaa  
1080  
aggtcacgaa gtagagaaag aaggcggagc agaagtagag atcgacgaag aagcagaagc  
1140  
catgatcgat cagaaagaaa acacagatct cgaagtcggg atcgaagaag atcaaaaagc  
1200  
cgggatcgaa agtcatataa gcacaggagc aaaagtcggg acagagaaca agatagaaaa  
1260  
tccaaggaga aagaaaagag gggatctgat gataaaaaa gtagtgtgaa gtccggtagt  
1320  
cgagaaaagc agagtgaaga cacaaacact gaatcgaagg aaagtgatac taagaatgag  
1380  
gtcaatggga ccagtgaaga cattaaatct gaagtgcagc gtaagtatgc acagatgaag  
1440  
atggaactaa gccgagtaag aagacatata aaagcctctt ctgaaggaaa agacagtgtg  
1500  
gtcctgcaaa acattttgag gtacattgtt ttgtctcagc tattttgtag cagactcgtg  
1560  
ccccattag tgtgcctctt tggaaattat cggccacatt tgtaatatag tcgccattga  
1620  
aaagttaatt atcctttttt tagggatttt gatgtcgttt cttttttttt ttaatacaaa  
1680  
ggttgaactg tttttttttt ccttttttgg tt  
1712

&lt;210&gt; 5188

&lt;211&gt; 489

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5188

Met Ile Ser Ala Ala Gln Leu Leu Asp Glu Leu Met Gly Arg Asp Arg  
1 5 10 15  
Asn Leu Ala Pro Asp Glu Lys Arg Ser Asn Val Arg Trp Asp His Glu  
20 25 30  
Ser Val Cys Lys Tyr Tyr Leu Cys Gly Phe Cys Pro Ala Glu Leu Phe  
35 40 45  
Thr Asn Thr Arg Ser Asp Leu Gly Pro Cys Glu Lys Ile His Asp Glu  
50 55 60  
Asn Leu Arg Lys Gln Tyr Glu Lys Ser Ser Arg Phe Met Lys Val Gly  
65 70 75 80  
Tyr Glu Arg Asp Phe Leu Arg Tyr Leu Gln Ser Leu Leu Ala Glu Val  
85 90 95  
Glu Arg Arg Ile Arg Arg Gly His Ala Arg Leu Ala Leu Ser Gln Asn  
100 105 110  
Gln Gln Ser Ser Gly Ala Ala Gly Pro Thr Gly Lys Asn Glu Glu Lys  
115 120 125  
Ile Gln Val Leu Thr Asp Lys Ile Asp Val Leu Leu Gln Gln Ile Glu  
130 135 140  
Glu Leu Gly Ser Glu Gly Lys Val Glu Glu Ala Gln Gly Met Met Lys  
145 150 155 160  
Leu Val Glu Gln Leu Lys Glu Glu Arg Glu Leu Leu Arg Ser Thr Thr  
165 170 175  
Ser Thr Ile Glu Ser Phe Ala Ala Gln Glu Lys Gln Met Glu Val Cys  
180 185 190  
Glu Val Cys Gly Ala Phe Leu Ile Val Gly Asp Ala Gln Ser Arg Val  
195 200 205  
Asp Asp His Leu Met Gly Lys Gln His Met Gly Tyr Ala Lys Ile Lys  
210 215 220  
Ala Thr Val Glu Glu Leu Lys Glu Lys Leu Arg Lys Arg Thr Glu Glu  
225 230 235 240  
Pro Asp Arg Asp Glu Arg Leu Lys Lys Glu Lys Gln Glu Arg Glu Glu  
245 250 255  
Arg Glu Lys Glu Arg Glu Arg Glu Arg Glu Glu Arg Glu Arg Lys Arg  
260 265 270  
Arg Arg Glu Glu Glu Arg Glu Lys Glu Arg Ala Arg Asp Arg Glu  
275 280 285  
Arg Arg Lys Arg Ser Arg Ser Arg Ser Arg His Ser Ser Arg Thr Ser  
290 295 300  
Asp Arg Arg Cys Ser Arg Ser Arg Asp His Lys Arg Ser Arg Ser Arg  
305 310 315 320  
Glu Arg Arg Arg Ser Arg Ser Arg Asp Arg Arg Arg Ser Arg Ser His  
325 330 335  
Asp Arg Ser Glu Arg Lys His Arg Ser Arg Ser Arg Asp Arg Arg Arg  
340 345 350  
Ser Lys Ser Arg Asp Arg Lys Ser Tyr Lys His Arg Ser Lys Ser Arg  
355 360 365  
Asp Arg Glu Gln Asp Arg Lys Ser Lys Glu Lys Glu Lys Arg Gly Ser  
370 375 380  
Asp Asp Lys Lys Ser Ser Val Lys Ser Gly Ser Arg Glu Lys Gln Ser  
385 390 395 400  
Glu Asp Thr Asn Thr Glu Ser Lys Glu Ser Asp Thr Lys Asn Glu Val  
405 410 415  
Asn Gly Thr Ser Glu Asp Ile Lys Ser Glu Val Gln Arg Lys Tyr Ala



420                      425                      430  
 Gln Met Lys Met Glu Leu Ser Arg Val Arg Arg His Thr Lys Ala Ser  
                     435                      440                      445  
 Ser Glu Gly Lys Asp Ser Val Val Leu Gln Asn Ile Leu Arg Tyr Ile  
                     450                      455                      460  
 Val Leu Ser Gln Leu Phe Cys Ser Arg Leu Val Pro Pro Leu Val Cys  
 465                      470                      475                      480  
 Leu Phe Gly Asn Tyr Arg Pro His Leu  
                     485

<210> 5189  
 <211> 323  
 <212> DNA  
 <213> Homo sapiens

<400> 5189  
 acgcgtgaag ggattacagg catgagccac tgcacctggc caggagaaat tggtttttata  
 60  
 acgtatgaca aatgcttgag taattcctgg cttgaaagtg ggctcacaat aaataactgg  
 120  
 aatccaaaaa taacaaaatg ttttagcaatt caggtaatgt caagcagtat tcaaacacat  
 180  
 gaagttaatc attccttaat tcctgtttat ttatatattca tttttgcttt ctttttactc  
 240  
 catgtgttat tcctacagaa gtcacaagtt aaatgttttt ggggaacttt gggggggggggg  
 300  
 gacaaacatc catgtgctgc taa  
 323

<210> 5190  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

<400> 5190  
 Met Ser His Cys Thr Trp Pro Gly Glu Ile Val Phe Ile Thr Tyr Asp  
   1                    5                    10                    15  
 Lys Cys Leu Ser Asn Ser Trp Leu Glu Ser Gly Leu Thr Ile Asn Asn  
                     20                    25                    30  
 Trp Asn Pro Lys Ile Thr Lys Cys Leu Ala Ile Gln Val Met Ser Ser  
                     35                    40                    45  
 Ser Ile Gln Thr His Glu Val Asn His Ser Leu Ile Pro Val Tyr Leu  
                     50                    55                    60  
 Tyr Phe Ile Phe Ala Phe Phe Leu Leu His Val Leu Phe Leu Gln Lys  
 65                    70                    75                    80  
 Ser Gln Val Lys Cys Phe Trp Gly Thr Leu Gly Gly Gly Asp Lys His  
                     85                    90                    95  
 Pro Cys Ala Ala  
                     100

<210> 5191  
 <211> 1632  
 <212> DNA  
 <213> Homo sapiens

<400> 5191  
tcccgcattt tagaggtgac tggagaactc tcacgtaggc ggccgccccca atttcccgcc  
60  
cgggtcatcg gggagccccct tcccaagccc cgcaaacacc tgcattgaaa gaggcaggct  
120  
tccttctgac agcagataac atgtcgctcg cggcgtcagc aagaggcgca tgcgccttgc  
180  
cgtgggaggc cgggtgcgca ggactggaac gcggttcctc cttcttcccc gcccgcccc  
240  
gcttcggcg gaagcggcct caacaaggga aactttattg ttcccgctggg gcagtcgagg  
300  
atgtcggtga attacgcggc ggggctgtcg ccgtacgcgg acaagggcaa gtgcggcctc  
360  
ccggagatct tcgaccccc ggaggagctg gagcggaagg tgtgggaact ggcgaggctg  
420  
gtctggcagt cttccagtgt ggtgttcac acgggtgccg gcatcagcac tgcctctggc  
480  
atccccgact tcaggggtcc ccacggagtc tggaccatgg aggagcgagg tctggcccc  
540  
aagtctgaca ccaccttga gagcgcgcg cccacgcaga cccacatggc gctggtgcag  
600  
ctggagcgcg tgggcctcct ccgcttcctg gtcagccaga acgtggacgg gctccatgtg  
660  
cgctcaggct tccccaggga caaactggca gagctccacg ggaacatgtt tgtggaagaa  
720  
tgtgccaagt gtaagacgca gtacgtccga gacacagtcg tgggcacat gggcctgaag  
780  
gccacgggccc ggctctgcac cgtggctaag gcaagggggc tgcgagcctg caggggaggc  
840  
tgcgaggccc ctgaggactc tcctcagctt cctcattgca ggggagagct gagggacacc  
900  
atcctagact gggaggactc cctgccccgac cgggacctgg cactcgccga tgaggccagc  
960  
aggaacgccg acctgtccat cacgctgggt acatcgctgc agatccggcc cagcgggaac  
1020  
ctgccgctgg ctaccaagcg ccggggaggc cgcctggtca tcgtcaacct gcagcccacc  
1080  
aagcacgacc gccatgctga cctccgcate catggctacg ttgacgaggt catgaccggg  
1140  
ctcatgaagc acctggggct ggagatcccc gcctgggacg gccccgtgt gctggagagg  
1200  
gcgctgccac ccctgccccg cccgcccacc cccaagctgg agcccaagga ggaatctccc  
1260  
accggatca acggctctat ccccgccggc cccaagcagg agccctgcgc ccagcacaac  
1320  
ggctcagagc ccgccagccc caaacgggag cggcccacca gccctgcccc ccacagaccc  
1380  
cccaaaaggg ggctctgtgt gcggttcgg gaagaagcca cccccagag gtgacagctg  
1440  
agccctgcc acacccagc ctctgacttg ctgtgtgtc cagaggtgag gctgggccct  
1500  
ccctggtctc cagcttaaac aggagtgaac tcctctgtc cccaggcct cccttctggg  
1560

ccccctacag cccaccctac cccctcctcca tgggccctgc aggaggggag acccaccttg  
1620

aagtggggga tc

1632

<210> 5192

<211> 377

<212> PRT

<213> Homo sapiens

<400> 5192

Met	Ser	Val	Asn	Tyr	Ala	Ala	Gly	Leu	Ser	Pro	Tyr	Ala	Asp	Lys	Gly
1			5						10					15	
Lys	Cys	Gly	Leu	Pro	Glu	Ile	Phe	Asp	Pro	Pro	Glu	Glu	Leu	Glu	Arg
			20					25					30		
Lys	Val	Trp	Glu	Leu	Ala	Arg	Leu	Val	Trp	Gln	Ser	Ser	Ser	Val	Val
			35				40					45			
Phe	His	Thr	Gly	Ala	Gly	Ile	Ser	Thr	Ala	Ser	Gly	Ile	Pro	Asp	Phe
	50					55					60				
Arg	Gly	Pro	His	Gly	Val	Trp	Thr	Met	Glu	Glu	Arg	Gly	Leu	Ala	Pro
65				70					75					80	
Lys	Phe	Asp	Thr	Thr	Phe	Glu	Ser	Ala	Arg	Pro	Thr	Gln	Thr	His	Met
			85					90						95	
Ala	Leu	Val	Gln	Leu	Glu	Arg	Val	Gly	Leu	Leu	Arg	Phe	Leu	Val	Ser
			100					105					110		
Gln	Asn	Val	Asp	Gly	Leu	His	Val	Arg	Ser	Gly	Phe	Pro	Arg	Asp	Lys
	115					120					125				
Leu	Ala	Glu	Leu	His	Gly	Asn	Met	Phe	Val	Glu	Glu	Cys	Ala	Lys	Cys
	130					135				140					
Lys	Thr	Gln	Tyr	Val	Arg	Asp	Thr	Val	Val	Gly	Thr	Met	Gly	Leu	Lys
145				150					155					160	
Ala	Thr	Gly	Arg	Leu	Cys	Thr	Val	Ala	Lys	Ala	Arg	Gly	Leu	Arg	Ala
			165					170					175		
Cys	Arg	Gly	Gly	Cys	Glu	Ala	Pro	Glu	Asp	Ser	Pro	Gln	Leu	Pro	His
			180					185					190		
Cys	Arg	Gly	Glu	Leu	Arg	Asp	Thr	Ile	Leu	Asp	Trp	Glu	Asp	Ser	Leu
	195					200						205			
Pro	Asp	Arg	Asp	Leu	Ala	Leu	Ala	Asp	Glu	Ala	Ser	Arg	Asn	Ala	Asp
	210					215					220				
Leu	Ser	Ile	Thr	Leu	Gly	Thr	Ser	Leu	Gln	Ile	Arg	Pro	Ser	Gly	Asn
225				230						235				240	
Leu	Pro	Leu	Ala	Thr	Lys	Arg	Arg	Gly	Gly	Arg	Leu	Val	Ile	Val	Asn
			245					250						255	
Leu	Gln	Pro	Thr	Lys	His	Asp	Arg	His	Ala	Asp	Leu	Arg	Ile	His	Gly
			260					265					270		
Tyr	Val	Asp	Glu	Val	Met	Thr	Arg	Leu	Met	Lys	His	Leu	Gly	Leu	Glu
	275					280					285				
Ile	Pro	Ala	Trp	Asp	Gly	Pro	Arg	Val	Leu	Glu	Arg	Ala	Leu	Pro	Pro
	290					295					300				
Leu	Pro	Arg	Pro	Pro	Thr	Pro	Lys	Leu	Glu	Pro	Lys	Glu	Glu	Ser	Pro
305				310							315			320	
Thr	Arg	Ile	Asn	Gly	Ser	Ile	Pro	Ala	Gly	Pro	Lys	Gln	Glu	Pro	Cys
			325					330					335		
Ala	Gln	His	Asn	Gly	Ser	Glu	Pro	Ala	Ser	Pro	Lys	Arg	Glu	Arg	Pro



<212> DNA  
<213> Homo sapiens

<400> 5195  
gggcccaggc tcacagaggt gtgaaagagg caagcacacc gcaggggcct ctgagcccag  
60  
ccagcctcgc ttcaatgctg ggaggctgac gtcttccttt ttgtcttctg cccaggccag  
120  
ctgcgggccg tccagcggct gtgccacttc tacagcgccg tcatgcccag cgaggcccag  
180  
tgtgtcatct accatgagct ccagctctcc ctggcctgca aggtggccga caaggtgctg  
240  
gaggggcagc tcctggagac catcagccag ctctacctgt ccctgggcac cgagcggggc  
300  
tacaaatccg cactggacta caccaaacga agtctgggga ttttcattga cctccagaag  
360  
aaagagaagg aggcgcatgc ctggctgcaa gcagggaaga tctattacat cttgcggcag  
420  
agcgagctgg tggacctcta catccaggtg gcacagaacg tggccctgta cacaggcgac  
480  
cccaacctgg ggctggagct gtttgaggcg gctggagaca tcttcttcga cggggcctgg  
540  
gagcgggaga aagctgtgtc cttctaccgg gaccgggccc tgcccctggc agtgactacg  
600  
ggcaaccgca aggcggagct gcggctgtgc aacaagctgg tggcactgct ggccacgctg  
660  
gaggagcccc aggagggtt ggagtttgcc cacatggccc tagcactcag catcactctg  
720  
ggggaccggc tgaacgagcg cgtggcctac caccggctgg ccgccctgca acaccgactg  
780  
ggccatggcg agctggcaga gcacttctac ctcaaggccc tgtcgctctg caactcgccg  
840  
ctggagtttg acgaggagac cctctactac gtgaaggtgt acctggtgct cggtgacatc  
900  
atcttctacg acctgaagga cccgtttgat gcagccgggt actaccagct ggcgctggcg  
960  
gccg  
964

<210> 5196  
<211> 267  
<212> PRT  
<213> Homo sapiens

<400> 5196  
Met Pro Ser Glu Ala Gln Cys Val Ile Tyr His Glu Leu Gln Leu Ser  
1 5 10 15  
Leu Ala Cys Lys Val Ala Asp Lys Val Leu Glu Gly Gln Leu Leu Glu  
20 25 30  
Thr Ile Ser Gln Leu Tyr Leu Ser Leu Gly Thr Glu Arg Ala Tyr Lys  
35 40 45  
Ser Ala Leu Asp Tyr Thr Lys Arg Ser Leu Gly Ile Phe Ile Asp Leu  
50 55 60  
Gln Lys Lys Glu Lys Glu Ala His Ala Trp Leu Gln Ala Gly Lys Ile

65						70						75						80
Tyr	Tyr	Ile	Leu	Arg	Gln	Ser	Glu	Leu	Val	Asp	Leu	Tyr	Ile	Gln	Val			
				85					90					95				
Ala	Gln	Asn	Val	Ala	Leu	Tyr	Thr	Gly	Asp	Pro	Asn	Leu	Gly	Leu	Glu			
				100					105					110				
Leu	Phe	Glu	Ala	Ala	Gly	Asp	Ile	Phe	Phe	Asp	Gly	Ala	Trp	Glu	Arg			
				115					120					125				
Glu	Lys	Ala	Val	Ser	Phe	Tyr	Arg	Asp	Arg	Ala	Leu	Pro	Leu	Ala	Val			
				130					135					140				
Thr	Thr	Gly	Asn	Arg	Lys	Ala	Glu	Leu	Arg	Leu	Cys	Asn	Lys	Leu	Val			
				145					150					155				
Ala	Leu	Leu	Ala	Thr	Leu	Glu	Glu	Pro	Gln	Glu	Gly	Leu	Glu	Phe	Ala			
				165					170					175				
His	Met	Ala	Leu	Ala	Leu	Ser	Ile	Thr	Leu	Gly	Asp	Arg	Leu	Asn	Glu			
				180					185					190				
Arg	Val	Ala	Tyr	His	Arg	Leu	Ala	Ala	Leu	Gln	His	Arg	Leu	Gly	His			
				195					200					205				
Gly	Glu	Leu	Ala	Glu	His	Phe	Tyr	Leu	Lys	Ala	Leu	Ser	Leu	Cys	Asn			
				210					215					220				
Ser	Pro	Leu	Glu	Phe	Asp	Glu	Glu	Thr	Leu	Tyr	Tyr	Val	Lys	Val	Tyr			
				225					230					235				
Leu	Val	Leu	Gly	Asp	Ile	Ile	Phe	Tyr	Asp	Leu	Lys	Asp	Pro	Phe	Asp			
				245					250					255				
Ala	Ala	Gly	Tyr	Tyr	Gln	Leu	Ala	Leu	Ala	Ala								
				260					265									

```
<210> 5197
<211> 1045
<212> DNA
<213> Homo sapiens
```

```

<400> 5197
natgttggtc aggcctggctc caaactcctg acctcgtgat ccgcccacct cagcctcgca
60
aagtgctggg attacaggcg tgagccacca tgttggtcag tctggctetca nactcctgtc
120
ctcatgatcc gcccacctca gcctcgcaaa gtgctgggat tacaggcatg agccaccacg
180
tccggccacc actgactttt tcattctttc tcattcttcc tgggccctcc tgctgttgta
240
ggcccccatg aagaagtgga ctattctgag aaactgaagt tcagtgatga tgaagaggag
300
gaagaagtgtg tgaaggacgg caggccaaag tggaacagtt gggaccctag gaggcagcgg
360
cagttgtcaa tgagctctgc agacagtgcg gacgctaagc ggactcgaga ggaagggaag
420
gactgggctg aagcagtggg tgcgtcccg tgggtccgaa aggcgcgaga ccctcagcca
480
ccgcccagga agcttcatgg ctgggcacca ggccctgact accagaagtc atcaatgggc
540
agcatgttcc ggcaacagtc catcgaggac aaggaggaca agccccacc aaggcagaag
600
ttcattcagt cagagatgtc cgaggcgggtg gagcgagccc gaaagcgccg ggaagaagag
660

```

gagcgccgag cccgggagga gaggctggcc gcctgtgctg ccaaactcaa gcagctggac  
 720  
 cagaagtgtg agcaggcacg aaaggcaggt gagggccgga agcaggcaga gaaggaagtg  
 780  
 ccctggtctc caagtgtgga gaaggcatct ccccaggaaa acggccctgc tgtccacaaa  
 840  
 ggctccccag aattccctgc ccaagagacc cccaccacat tcccagaaga ggcaccacaca  
 900  
 gtgtccccag cagtggcaca gagcaacagc agtgaggaag aggccagaga ggctgggtcc  
 960  
 cctgcacagg agttcaagta tcagaagtcc cttcctcccc gattccagcg ccagcagcag  
 1020  
 caacaacagc aggagcagct gtaca  
 1045

<210> 5198

<211> 283

<212> PRT

<213> Homo sapiens

<400> 5198

Leu	Phe	His	Ser	Phe	Ser	Phe	Phe	Leu	Gly	Pro	Pro	Ala	Val	Val	Gly
1				5				10					15		
Pro	His	Glu	Glu	Val	Asp	Tyr	Ser	Glu	Lys	Leu	Lys	Phe	Ser	Asp	Asp
		20						25					30		
Glu	Glu	Glu	Glu	Glu	Val	Val	Lys	Asp	Gly	Arg	Pro	Lys	Trp	Asn	Ser
		35					40					45			
Trp	Asp	Pro	Arg	Arg	Gln	Arg	Gln	Leu	Ser	Met	Ser	Ser	Ala	Asp	Ser
	50					55				60					
Ala	Asp	Ala	Lys	Arg	Thr	Arg	Glu	Glu	Gly	Lys	Asp	Trp	Ala	Glu	Ala
65					70					75				80	
Val	Gly	Ala	Ser	Arg	Val	Val	Arg	Lys	Ala	Pro	Asp	Pro	Gln	Pro	Pro
				85					90					95	
Pro	Arg	Lys	Leu	His	Gly	Trp	Ala	Pro	Gly	Pro	Asp	Tyr	Gln	Lys	Ser
			100					105					110		
Ser	Met	Gly	Ser	Met	Phe	Arg	Gln	Gln	Ser	Ile	Glu	Asp	Lys	Glu	Asp
		115					120					125			
Lys	Pro	Pro	Pro	Arg	Gln	Lys	Phe	Ile	Gln	Ser	Glu	Met	Ser	Glu	Ala
		130				135						140			
Val	Glu	Arg	Ala	Arg	Lys	Arg	Arg	Glu	Glu	Glu	Glu	Arg	Arg	Ala	Arg
145					150					155					160
Glu	Glu	Arg	Leu	Ala	Ala	Cys	Ala	Ala	Lys	Leu	Lys	Gln	Leu	Asp	Gln
			165					170						175	
Lys	Cys	Lys	Gln	Ala	Arg	Lys	Ala	Gly	Glu	Ala	Arg	Lys	Gln	Ala	Glu
			180					185					190		
Lys	Glu	Val	Pro	Trp	Ser	Pro	Ser	Ala	Glu	Lys	Ala	Ser	Pro	Gln	Glu
		195					200					205			
Asn	Gly	Pro	Ala	Val	His	Lys	Gly	Ser	Pro	Glu	Phe	Pro	Ala	Gln	Glu
		210				215					220				
Thr	Pro	Thr	Thr	Phe	Pro	Glu	Glu	Ala	Pro	Thr	Val	Ser	Pro	Ala	Val
225					230					235					240
Ala	Gln	Ser	Asn	Ser	Ser	Glu	Glu	Glu	Ala	Arg	Glu	Ala	Gly	Ser	Pro
			245						250					255	
Ala	Gln	Glu	Phe	Lys	Tyr	Gln	Lys	Ser	Leu	Pro	Pro	Arg	Phe	Gln	Arg

260 265 270  
Gln Gln Gln Gln Gln Gln Gln Glu Gln Leu Tyr  
275 280

<210> 5199  
<211> 1332  
<212> DNA  
<213> Homo sapiens

<400> 5199  
nnactagtgc agagtgttta gagatcactc agtttttaaa gactggcctt tatcgtgtct  
60  
cagtgcagcc gaggcagagc ctttgaagga tgcgatgttg tcattcttac taatctagtc  
120  
cagccgctga ggtgactttc aacggcagac cgtctcctga gcgccccagg tagaatttca  
180  
aaagtctccg ggaccattat ggcagtcaag tggacgggtg ggcattcttc tcctgtectc  
240  
tgcctgaatg caagtaaaga agggctgctg gcttctggag cagagggcgg agatctcacg  
300  
gcttggggtg aagatggaac tccattagga cacacgcggt tccaaggggc tgatgatgtt  
360  
accagtgtct tattttctcc ctctgtccc accaagctct atgcctcaca tggagaaacc  
420  
attagtgtac tggatgtcag gtccctcaaa gattccttgg accattttca tgtgaatgaa  
480  
gaagaaatca attgtctttc attgaatcaa acggaaaacc tgctggcttc tgctgacgac  
540  
tctggggcaa tcaaaatcct agacttggaa aacaagaaag ttatcagatc cttgaagaga  
600  
cattccaata tctgtctctc agtggctttt cggcctcaga ggcctcagag cctgggtgtca  
660  
tgtggactgg atatgcaggt gatgctgtgg agtcttcaaa aagcccgacc actctggatt  
720  
acaaatttac aggaggatga aacagaagaa atggaaggcc cacagtcacc tggtcagctc  
780  
ttaaaccctg ccctagccca ttctatctct gtggcttcgt gtggtaatat ttttagttgt  
840  
ggtgcagaag atggtaaggc tcgaatcttt cgggtgatgg gagttaagtg tgaacaggaa  
900  
ctgggattta agggccacac ttcaggggta tcccaggtct gctttctccc agaatectat  
960  
ttgctgctta ctggagggaag tgatgggaag atcacgttgt gggatgcaaa cagtgaagtt  
1020  
gagaaaaaac agaagagtcc cacaaaacgt acccacagga agaaaccta aagaggaact  
1080  
tgcaccaagc aggggtggaaa tactaacgct tcagtaacag atgaggaaga acatggcaac  
1140  
attttaccga agctaaatat tgaacatgga gaaaaagtga actggctctt gggtaaaaa  
1200  
ataaagggac accaaaatat attagtagct gatcaaaacta gttgtatata tgtatacccc  
1260  
ttaaatgaat tttaaatacca ataaaaacat ttgaagaatt gtggcaaac tgtttttcag  
1320



attaaaaaaaa aa  
1332

<210> 5200  
<211> 358  
<212> PRT  
<213> Homo sapiens

<400> 5200  
Met Ala Val Lys Trp Thr Gly Gly His Ser Ser Pro Val Leu Cys Leu  
1 5 10 15  
Asn Ala Ser Lys Glu Gly Leu Leu Ala Ser Gly Ala Glu Gly Gly Asp  
20 25 30  
Leu Thr Ala Trp Gly Glu Asp Gly Thr Pro Leu Gly His Thr Arg Phe  
35 40 45  
Gln Gly Ala Asp Asp Val Thr Ser Val Leu Phe Ser Pro Ser Cys Pro  
50 55 60  
Thr Lys Leu Tyr Ala Ser His Gly Glu Thr Ile Ser Val Leu Asp Val  
65 70 75 80  
Arg Ser Leu Lys Asp Ser Leu Asp His Phe His Val Asn Glu Glu Glu  
85 90 95  
Ile Asn Cys Leu Ser Leu Asn Gln Thr Glu Asn Leu Leu Ala Ser Ala  
100 105 110  
Asp Asp Ser Gly Ala Ile Lys Ile Leu Asp Leu Glu Asn Lys Lys Val  
115 120 125  
Ile Arg Ser Leu Lys Arg His Ser Asn Ile Cys Ser Ser Val Ala Phe  
130 135 140  
Arg Pro Gln Arg Pro Gln Ser Leu Val Ser Cys Gly Leu Asp Met Gln  
145 150 155 160  
Val Met Leu Trp Ser Leu Gln Lys Ala Arg Pro Leu Trp Ile Thr Asn  
165 170 175  
Leu Gln Glu Asp Glu Thr Glu Glu Met Glu Gly Pro Gln Ser Pro Gly  
180 185 190  
Gln Leu Leu Asn Pro Ala Leu Ala His Ser Ile Ser Val Ala Ser Cys  
195 200 205  
Gly Asn Ile Phe Ser Cys Gly Ala Glu Asp Gly Lys Val Arg Ile Phe  
210 215 220  
Arg Val Met Gly Val Lys Cys Glu Gln Glu Leu Gly Phe Lys Gly His  
225 230 235 240  
Thr Ser Gly Val Ser Gln Val Cys Phe Leu Pro Glu Ser Tyr Leu Leu  
245 250 255  
Leu Thr Gly Gly Asn Asp Gly Lys Ile Thr Leu Trp Asp Ala Asn Ser  
260 265 270  
Glu Val Glu Lys Lys Gln Lys Ser Pro Thr Lys Arg Thr His Arg Lys  
275 280 285  
Lys Pro Lys Arg Gly Thr Cys Thr Lys Gln Gly Gly Asn Thr Asn Ala  
290 295 300  
Ser Val Thr Asp Glu Glu Glu His Gly Asn Ile Leu Pro Lys Leu Asn  
305 310 315 320  
Ile Glu His Gly Glu Lys Val Asn Trp Leu Leu Gly Thr Lys Ile Lys  
325 330 335  
Gly His Gln Asn Ile Leu Val Ala Asp Gln Thr Ser Cys Ile Ser Val  
340 345 350  
Tyr Pro Leu Asn Glu Phe

355

&lt;210&gt; 5201

&lt;211&gt; 6104

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5201

nngtgccagt cgtgctttgt gaaaaataac aaagtggca cagaaatttg tgatctgaaa  
60  
acccggctcc cttccccaca aggctcctgg gcctccggga agacggggccc ctgtttgcca  
120  
tctcgggggt gttccctgtg ggaggggtgag tgggtgagga cgagcctgct gcgtgtggag  
180  
cctcgagtgg gccctggctg ccactaccgc acagaggccg tgcgcgctg ggctgggctt  
240  
gggtggcctc tgtctttgca tctctgagaa ggagtcgggt ggtaacgggt ggggtcagga  
300  
agaattctgc caagtatctt tactgtcatt ctgaccatag cctctttgtt cccgcattcg  
360  
aacttttggg tcttactttg ctgctcgttt agtccctggg gatttcagat cttaggctgt  
420  
tgtttcaccg tatgggaggg ttgatgtgag cttgcttgga gacacacggg gcagcatcag  
480  
ggaccttccc agggcccagc aaattcaagt cggctctgag acctctcagc taccgcggg  
540  
acctcttgta acccatcggc atcttccagg aatccgccga gtgacttgag gaagatgcta  
600  
acgcagtaag gtctgtgctg ggccaagagc agctttgaag ctccagagaa ccaccccgtc  
660  
aggttccttg tggaagctcc cctcatccgt ggtgcagcag gctgagcact gcgcgtttgc  
720  
cacgtgctgc ccgtgacagc acattgagcc acagcatttg tagacaggac agaggggtgc  
780  
ctgccccctg cccctgctgg cacatttaac ccttgctccc tgacctcagt tctgtgcccc  
840  
accaaagcc caggggcaag aggccaccct ggaagctgcc aatcttccaa ggtgggtgtg  
900  
gggcacgggtg ggggcgggca gctcccaggc ccttgggcag gctggggtga cggcagaggc  
960  
cacagacca gctctgacaa gtcctatcat cctctgctca gcagcgacct ccctggcccc  
1020  
actttgccc gagtttgggg tccccccagg tatagctata ggcggcagt cctgtccctg  
1080  
gcctgccttg atttcagcca caccctgca gccctgcac ccagctctgg ggtgtgcaga  
1140  
ggtttgtgtc tccagggaac acacggctgg agagaaatag ggagatgcag gaagtggggg  
1200  
cccatggggc cccaagaag cggactctcc aaggggtacc cccacccgc taccttcccc  
1260  
acggacgggc ccctcctgga gcccataccc tcctgtgagg ccattccagt gtcttctaga  
1320  
aagactcgtc tgccaggagt gcgttctttg ttgaaaaatg ccctgaagcg aaaagatgca  
1380

4379

ggtttatatg gaacccccac cccctcccc actctccac tctgttcgtt ctgaatgtct  
1440  
tcacgagcgt gcatcagggc gcctggctcc cccacctcag ccagtgagtc agacacgggt  
1500  
ttcgcagcca tgtttcctgg ctccgaggac acgggtggca ggcccgttgc agcccagagc  
1560  
cactggctcc tacagggcgc cgccacacca gcaggaagga ggatggctgt gtccggagcc  
1620  
tggcggggag gggcctccc cagtatgtga gtgcagggat ctgccagaac cacctggccc  
1680  
tctgtagggc gtttaactgg aaataccctc actgccaagt ggagactggg gcgtgtgcca  
1740  
cattgccagc caccaggaaa gcttttcttt ttcttttttt tttttttttt aaacaccaag  
1800  
agcacgtata gcatggggga aagaacctaa atgtctctct gtccgtgag ctggtgaaaa  
1860  
accagcatg agaacgcagt gtcagggtgt ggactccttc tgccctgca gtgggtgtta  
1920  
cgggcgggtgt gccctggcga gcaagctttg attcttggtt ctttgagctc gtttcagagg  
1980  
ctgagtcctc acatcagctt tagttcttgg acttccctgt attaagcaag aattaggaga  
2040  
atggctgtcc ctgcaggcgc ctcccgtaa tcctgagctc tctggcgcaa tctgaaactt  
2100  
ctcttctgtt ttctttggct gtatcagccg aaccaggaga ggccctgggt gcgactaagg  
2160  
agaaagaaat cgggggtttc tgagagcaga tgggtgcctt gtgggtgcag ggcttttgtg  
2220  
gaaattgtca gcctctacgg gcagagtcgc gcacccctc cccagactgc ctgctgtcaa  
2280  
accagggagc agctggagcc tgccctgtcc acggcccgtt tccaccggg catgttcgtc  
2340  
tctcatgact tcggcagagg cccctgggtg ccttcagttt cagtttctca tccaggaagg  
2400  
taaccttggg cattggcagt gggtttccct atggcttggg tccagattag aattgatctt  
2460  
tgttttcact ttccatagtt aataacatgc aaaataatga gaagaattta ttttaagggtg  
2520  
acagctatac tgggtccaaca tcgcctgctt attgtcaggg tacagaagtt taatactttc  
2580  
ttaatccagt ttttcaaact tctccctgta gaccgtaagg atgaattcca caataggatc  
2640  
ctttttaaaa tcgattttta attgttgctt agtctgcca aggttattat gtgcatctgt  
2700  
tatttttcca atacatgtaa acagttgcag catgatgctt tgtttaatgt cctgttctta  
2760  
agctcgtag agccagtttt gaaacgtttg gtcttaccgt gaacggaggc tggcttggct  
2820  
tagccacgct gatgagtaag tgagggatgt ctccatcttg agatcaccag gcaagagagt  
2880  
tgcctgcacc aggtaagagg ccaaagcccc tggggtaaca gtccccaccg ctaccagagg  
2940  
taaaacaata aaagctatgt ggttgagctc aggcctctcg tgcctgggtg cagagaaggc  
3000

agagcccaca gtaggtgcag ggtgcaaggc cctgggaggg cactggccag ggaaggtggt  
3060  
atagatggcc ctcagattgc ggggccccga gcagctcccc actctgcccc tccaccttcc  
3120  
ctggctccag cctcattctc tcttttagttt aactatgcaa agagaggagg ttgagagtgt  
3180  
tctggcagct ggagctcttt tccttgctct tcctgccctc cgatggggcc acctgtgtcg  
3240  
gggcagcagt gtccatgttt atggagatca gaggtgtccc cactgtgtgg ctggactgta  
3300  
ctctgtgcc cgggtagcca ggagtctctc cctctctccc ctgccgctg cctggctctca  
3360  
tgggcctcct tcacacaccc ctccctgtgg atcgccctgc tgggcccaga gcagggaac  
3420  
tggagtttgt gtagtgagcag agcaggttat gtgcagacag ggaaacgaga actttggacc  
3480  
tggctttctg agtccagggt agagctgtgt gggccccga tgccactctg cccgccggag  
3540  
ggatgtgctt gctgagcctt ttccttccac gccgcctctc actgccaggc cagcggcttc  
3600  
cgctgagact cgctggagag ggggctcccc tgtccgtcca ccgagcactc agatggatgc  
3660  
tgatcaccag ggccgagggg gctcccagaa ggacccagg ccctggggag ggtggctgtg  
3720  
ggaggccaag tccactgccc ggaagtcttg tcagccctaa gccagggaag cctggagcgt  
3780  
ggcctggcgg gtctgggtgg acaccgtccc cactccggac tcccagcaca ggggaggaga  
3840  
cctgagcctg tatggcctg tagccctggg cagagctggg cctgtcgtgt gttcctgcct  
3900  
ggcaggtgca ggtgctggcc atctgcagggt ggaaggagggt gggaatcttg gattttttgt  
3960  
ttttttttgt cttttttttt tttgagatga agtctcgtc tgnacacca ggctggcgtg  
4020  
cagtgggtgt atctcggctc actgcaaact ccgcttctg ggttcaagt gttctcctgc  
4080  
cccagcctcc caagtagctg ggattacagg catgagccac cacgctcagc tgatttttgt  
4140  
atttttagta gagatggggg ttcaccatgt tggccaagct ggtctcaaac tcctgacctc  
4200  
aagtgatctg cccgcctcgg cctcccagag tgctgggatt acaggcgtga gccagtgcac  
4260  
ccggcggaat cttggaattt ttatagacag cacctcagtt tctgactcca gccgcacacc  
4320  
tcctgcctct accagcaggg gttgccgcca gaccagagcc agggccagggt ccctgcgtcc  
4380  
atcccccccg gtaggatgga cgtgagccat ccttctaggg gacttttttc agtgtgcgac  
4440  
tcgtctctgt taggtggtag gagccagttt gtgtggcctg tgccacgctc cacagtgcgt  
4500  
ggctgggctc tgtgtgtggc ctgtgtcccc tgtccctgca ggaccagca ggcacgtgg  
4560  
cgtgacagct gtgtccaagc cactgcccg gcatcccatc accaccagg gtgcacggtc  
4620

tctcctgctg ggggctttct gtcgcatgtg tgtctcctgt cgactctgca gtttgttctc  
4680  
agagcagaat gtttcctggt ctcaagtgcac aaagacactg gttttcaatc ggcgtctaaa  
4740  
accacgttcc tgcctttcat tgcaacacgg tgtgttcatt tgtttaaaac agtttaataga  
4800  
gtaagtttag atgactgggtc aatatcttaa aaatgtatat tagtaagaag ttcttcctgg  
4860  
aatttttctt tgcattctgg cagaataaac aggtgttttt agttttccca ctgtctgagc  
4920  
caagcaggac cctgtcccag agcaagagat gtccccctcc atctctgacc cttgcctggg  
4980  
acaagctttg atggggggcc ccagcttcaa ggctgtgggtg ggaacagcac ccccaaagtgc  
5040  
cagcctctcc tttcttccca tccaccagta tactgcgggg ccatttctgg tctttgtcca  
5100  
acaggaaacc catttctggt gggatatgcc ttccagtgc acagggccac tcaccccatg  
5160  
catctctgtc ctgcccgtca gtgctgggac ggacagcaag ggcaagcca gtgtctggcg  
5220  
gataggtggg tgggaacaga gaggggagaa tgccgtccta agcttctgct tggggatccc  
5280  
ccacacgacc tgggtactgc ctgggaaacc tgtcctaagt aaaactatgg acctcgctc  
5340  
gcccaccggc ctgcgaagcc agcatctccg tgaagggtgga tggaaagcgc tttgtcctca  
5400  
ctttgagctg caagctgggt cagcggctct gaagccctcg agtgacttcc taaccaaga  
5460  
cccagccctt ggcaggagga ggggtgggtgc agggctgggtg ggacaaaaag aggcctcagc  
5520  
aggcctggaa gacccttcca gtacatcca cagcgtgtcg agcagctggg agaacctgtg  
5580  
tcaagctcga gccgtcatag gtcccatga ggtgtctgaa gccccttctt ggtgatggga  
5640  
ggcagaggtg ctgacgttct ggagcatgga cgtgagtcct cagctggctc cgcgtgggcc  
5700  
cttgagggtt gccagggtgtg tgggtgacct ctggatgcct ttaacttcat ggctgcgtca  
5760  
ttcctgattt agaactttaa ccggagcttc atctagtgat tgcaaaactg gaccaatggg  
5820  
aggacggcgg cgcagcccg cccctccgtg gaatggagct cagctcttcg gaggcacaa  
5880  
agcacctgtc gcctccgtgg tccccctgcc gagggagtgc ggcctctgca aggttcgggg  
5940  
gtggcttcgt ttgcctggag tggccggccc tgcttggtgc atgtggatgt ttgtgagcct  
6000  
cggtcctaca gcactgtgta ggctgcatct gtttcgtgct ggtcctgttg acttgatga  
6060  
tatccacaaa taaatatttt catggcggta aaaaaaaaaa aaaa  
6104

&lt;210&gt; 5202

&lt;211&gt; 108

&lt;212&gt; PRT

<213> Homo sapiens

<400> 5202

```

Ser Pro Gly Pro Arg Gly Leu Pro Glu Gly Pro Gln Ala Leu Gly Arg
 1           5           10           15
Val Ala Val Gly Gly Gln Val His Cys Pro Glu Val Leu Ser Ala Leu
          20           25           30
Ser Gln Gly Ser Leu Glu Arg Gly Leu Ala Gly Leu Gly Gly His Arg
          35           40           45
Pro His Ser Gly Leu Pro Ala Gln Gly Arg Arg Pro Glu Pro Val Trp
          50           55           60
Pro Cys Ser Pro Gly Gln Ser Trp Ala Cys Arg Val Phe Leu Pro Gly
65           70           75           80
Arg Cys Arg Cys Trp Pro Ser Ala Gly Gly Arg Arg Trp Glu Ser Trp
          85           90           95
Ile Phe Cys Phe Phe Leu Ser Phe Phe Phe Leu Arg
          100          105

```

<210> 5203

<211> 1863

<212> DNA

<213> Homo sapiens

<400> 5203

```

gaaaatttgg tagaaaaaga gataagtgga tctaaagtca cttgtagaga tcttgtagaa
60
tattttaagg cttacatcaa aatctatcaa ggagaagaac ttccacatcc aaagtccatg
120
cttcaggcaa cagctgaagc taataatctt gctgcagtag caggagcaag agatacctat
180
tgtaaaagta tggaacaggt atgtggaggg gacaagcctt acattgcacc ttcagatctg
240
gagcgaaaac acttggatct caaggaagtg gcgataaaac aatttcgttc agtaaaaaag
300
atgggtggag atgagttctg ccgtcgttat caggaccagc ttgaagctga aattgaagaa
360
acctatgcaa attttataaa gcacaatgat ggcaaaaata tcttctatgc tgctcgtacc
420
ccagccacac tgtttgcggt catgtttgct atgtatataa tctcaggact gactggcttc
480
attggcctaa actctatagc tgtcttgtgt aaccttgtca tggggttagc actgatattt
540
ctttgtactt gggcatatgt taaatactct ggggagttca gagaaattgg aacagtgatt
600
gatcagattg ctgaaacact atgggaacag gtattgaagc ccctgggtga taatttgatg
660
gaggaaaaca taaggcagtc tgtaacaaac tctatcaaag caggcctgac tgaccagggtg
720
tctcatcatg ccagattaaa gacagactga cagttcatct cctcacggac tccactctct
780
ttttttttca tgcttgctgt acaatgagaa ctcaaataaa aataaaccaa agttttacaat
840
caactgtaga agtagtttag tgtaactggc ttcacagatg gctgccacag agtgtgaaga
900

```

ttgtttgtta gttttaagca ttcttttaaat ggctcctaag acatgcagat ggactgagga  
 960  
 gcattgggta atcatgcacc tttgtgccat gtttaactct tttatttttt tttacttaat  
 1020  
 ctaatgtag tgaatttgtc ttatgtaaaa ggatatttca gggaaatatt ttcagaaatc  
 1080  
 tatttagagt ctctttaaca cagtgtccca ttgaaatttt aatttttaga gaatttatga  
 1140  
 atcactgttt caagaaccag attggaaaga caatgaagcc tttattgagc cactacatta  
 1200  
 aaagtatata ttgctttact gccttcaata ccagtattac atcaatgcat gtatcagaaa  
 1260  
 cttcacagaa attacatggc aactcttgta gctaagaaag taattctgag gtgtacattt  
 1320  
 gtcttgcttt tttaaattta taaacttgcc ctaaaaggag atgcatatct gggaaactga  
 1380  
 actgtctttt tgcagtttag ccttcatgta tataaaatat gccattaatt ttattgggga  
 1440  
 agaaattcca tccaaaaatg ttgcctacag ctatgagtta agagtgtctg tacagtgtgt  
 1500  
 agcttttatt ttctaaaatc acagataggg catgtatatg acttataaat atataaatac  
 1560  
 gattttgtat taaaagtttt gtagtttatg gcaaaatctg gtcctgtggt aggctaaata  
 1620  
 agtacagtcc ctgtgaaagg aatgtttgtg gctcatgtca gtgtgtgaat gcatagacaa  
 1680  
 tttgaagttt ttgatattt tgtgatattt atcttgagca ctgcaatctc accccccccc  
 1740  
 cccaccaag ggaattcaat gggaatgttt attgtgactt tgcctctgt tgcattttaa  
 1800  
 agttatttcc tgtaatttat tttcagtaca taattaaaaa tttgttgtat atataaaaaa  
 1860  
 aaa  
 1863

&lt;210&gt; 5204

&lt;211&gt; 249

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5204

Glu	Asn	Leu	Val	Glu	Lys	Glu	Ile	Ser	Gly	Ser	Lys	Val	Thr	Cys	Arg
1			5						10					15	
Asp	Leu	Val	Glu	Tyr	Phe	Lys	Ala	Tyr	Ile	Lys	Ile	Tyr	Gln	Gly	Glu
		20						25					30		
Glu	Leu	Pro	His	Pro	Lys	Ser	Met	Leu	Gln	Ala	Thr	Ala	Glu	Ala	Asn
		35					40					45			
Asn	Leu	Ala	Ala	Val	Ala	Gly	Ala	Arg	Asp	Thr	Tyr	Cys	Lys	Ser	Met
	50					55				60					
Glu	Gln	Val	Cys	Gly	Gly	Asp	Lys	Pro	Tyr	Ile	Ala	Pro	Ser	Asp	Leu
65				70					75					80	
Glu	Arg	Lys	His	Leu	Asp	Leu	Lys	Glu	Val	Ala	Ile	Lys	Gln	Phe	Arg
			85					90					95		
Ser	Val	Lys	Lys	Met	Gly	Gly	Asp	Glu	Phe	Cys	Arg	Arg	Tyr	Gln	Asp

	100		105		110										
Gln	Leu	Glu	Ala	Glu	Ile	Glu	Glu	Thr	Tyr	Ala	Asn	Phe	Ile	Lys	His
	115		120		125										
Asn	Asp	Gly	Lys	Asn	Ile	Phe	Tyr	Ala	Ala	Arg	Thr	Pro	Ala	Thr	Leu
	130		135		140										
Phe	Ala	Val	Met	Phe	Ala	Met	Tyr	Ile	Ile	Ser	Gly	Leu	Thr	Gly	Phe
145			150		155					160					
Ile	Gly	Leu	Asn	Ser	Ile	Ala	Val	Leu	Cys	Asn	Leu	Val	Met	Gly	Leu
	165		170		175										
Ala	Leu	Ile	Phe	Leu	Cys	Thr	Trp	Ala	Tyr	Val	Lys	Tyr	Ser	Gly	Glu
	180		185		190										
Phe	Arg	Glu	Ile	Gly	Thr	Val	Ile	Asp	Gln	Ile	Ala	Glu	Thr	Leu	Trp
	195		200		205										
Glu	Gln	Val	Leu	Lys	Pro	Leu	Gly	Asp	Asn	Leu	Met	Glu	Glu	Asn	Ile
	210		215		220										
Arg	Gln	Ser	Val	Thr	Asn	Ser	Ile	Lys	Ala	Gly	Leu	Thr	Asp	Gln	Val
225			230		235									240	
Ser	His	His	Ala	Arg	Leu	Lys	Thr	Asp							
	245														

&lt;210&gt; 5205

&lt;211&gt; 2011

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5205

cggccggggc ccagcatggg tgtccccacg gctgagggcc tggcagctgc tgcgccctcg  
 60  
 ctttcttgac attccctggc ttctgtgctc tcttccccag gccaccccag cagacatgtt  
 120  
 gccaaaggcct ttcgggtcaa gtccaacacg gccatcaagg ggtcggacag gagaaagctt  
 180  
 cgagctgatg tgacaactgc tttccccacc cttggaactg atcaagtctc tgagttagta  
 240  
 cctggaaagg aggagctcaa cattgtgaag ttgtatgctc acaaagggga tgcagtgact  
 300  
 gtgtacgtga gtggtggtaa ccccatcctc tttgaactgg agaaaaatct gtatccaaca  
 360  
 gtgtacacgc tgtggtccta tcctgatctt ctgccaacct ttacaacatg gcctctggtg  
 420  
 ctcgagaaac tggtaggggg agcagatttg atgctgcctg gactggtgat gccccctgct  
 480  
 ggtctgcctc aggtacagaa gggcgacctc tgtgccattt ctttggtggg gaacagagcc  
 540  
 cctgtagcca ttggagttgc agccatgtcc acagctgaga tgctcacgtc aggcctgaag  
 600  
 ggaaggggct tctctgtgct ccacacttac caggaccact tgtggcggtc tggaaacaag  
 660  
 tcctctccac cttccattgc tccactggcc ctggattcag cagatctcag tgaagagaag  
 720  
 gggctctgtcc agatggactc caccctgcag ggagacatga ggcacatgac cctggagggg  
 780  
 gaagaggaga atggggaggt tcaccagggc acgtgaagac aatctctctc agaagcccca  
 840



gaagacacca gcaccagggg cctgaaccaa gactccacag atagcaaaac gcttcaagaa  
 900  
 caaatggatg agctgttaca gcaatgcttc ttacatgcct tgaagtgccg agtcaaaaag  
 960  
 gctgacctcc ctttactcac cagcactttc cttggcagcc acatgtttctc ctgctgcccc  
 1020  
 gaangacgac aactggacat aaagaagtca agctacaaaa agctctctaa gttcctgcag  
 1080  
 caaatgcagc aggagcagat tatacaggtg aaggagctga gcaaaggggt ggagagcatt  
 1140  
 gtggctgtgg actggaaaca cccgaggatt acatctttcg tcatacccga gccctccccg  
 1200  
 acctcccaga ctatccagga gggtagcagg gaacagccct atcacctcc agatataaaa  
 1260  
 cccctctact gtgtcccagc cagcatgacc ctgctcttcc aggagtctgg ccacaagaag  
 1320  
 gggagctttc tggagggcag tgaggtccga acgatcgtca ttaactacgc caagaaaaat  
 1380  
 gacctggttg atgcagacaa caaaaatctt gtgagattgg atcccatcct atgtgactgc  
 1440  
 atcttagaga aaaatgaaca gcatacagtc atgaagcttc catgggacag tcttctgacc  
 1500  
 aggtgttttg aaaaattaca gcctgcctat caagtgaccc ttcccggaca agagcccatt  
 1560  
 gtgaagaaag ggagaatctg tccaattgac atcacctag cacaagagc gtctaataaa  
 1620  
 aagggtgaccg tgggtccgaa cttggaggcc tatggtctgg acccatactc agtggctgcc  
 1680  
 atccttcagc agcgatgcca ggctagcacc accgtcaatc ctgcccctgg ggccaaggac  
 1740  
 agccttcagg tgcagatcca gggaaaccag gtccaccacc tcggctggct attgcttgaa  
 1800  
 gagtatcagc tccctcgaaa acacatccaa ggtctagaaa aggccctcaa acctggcaag  
 1860  
 aagaagtgac agactctttt gtctcacgtg gtggatccgg tggaaatcca agctctgggc  
 1920  
 tggtaatttt tatgagcatt ttcagctttt gcaaatacaa aatataattc tttacaaaaa  
 1980  
 taaattttta ttctgatcta aaaaaaaaaa a  
 2011

&lt;210&gt; 5206

&lt;211&gt; 248

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5206

His	Ser	Leu	Ala	Ser	Val	Leu	Ser	Ser	Pro	Gly	His	Pro	Ser	Arg	His
1				5					10					15	
Val	Ala	Lys	Ala	Phe	Arg	Val	Lys	Ser	Asn	Thr	Ala	Ile	Lys	Gly	Ser
			20					25					30		
Asp	Arg	Arg	Lys	Leu	Arg	Ala	Asp	Val	Thr	Thr	Ala	Phe	Pro	Thr	Leu
			35				40					45			
Gly	Thr	Asp	Gln	Val	Ser	Glu	Leu	Val	Pro	Gly	Lys	Glu	Glu	Leu	Asn

50 55 60  
 Ile Val Lys Leu Tyr Ala His Lys Gly Asp Ala Val Thr Val Tyr Val  
 65 70 75 80  
 Ser Gly Gly Asn Pro Ile Leu Phe Glu Leu Glu Lys Asn Leu Tyr Pro  
 85 90 95  
 Thr Val Tyr Thr Leu Trp Ser Tyr Pro Asp Leu Leu Pro Thr Phe Thr  
 100 105 110  
 Thr Trp Pro Leu Val Leu Glu Lys Leu Val Gly Gly Ala Asp Leu Met  
 115 120 125  
 Leu Pro Gly Leu Val Met Pro Pro Ala Gly Leu Pro Gln Val Gln Lys  
 130 135 140  
 Gly Asp Leu Cys Ala Ile Ser Leu Val Gly Asn Arg Ala Pro Val Ala  
 145 150 155 160  
 Ile Gly Val Ala Ala Met Ser Thr Ala Glu Met Leu Thr Ser Gly Leu  
 165 170 175  
 Lys Gly Arg Gly Phe Ser Val Leu His Thr Tyr Gln Asp His Leu Trp  
 180 185 190  
 Arg Ser Gly Asn Lys Ser Ser Pro Pro Ser Ile Ala Pro Leu Ala Leu  
 195 200 205  
 Asp Ser Ala Asp Leu Ser Glu Glu Lys Gly Ser Val Gln Met Asp Ser  
 210 215 220  
 Thr Leu Gln Gly Asp Met Arg His Met Thr Leu Glu Gly Glu Glu Glu  
 225 230 235 240  
 Asn Gly Glu Val His Gln Gly Thr  
 245

<210> 5207  
 <211> 594  
 <212> DNA  
 <213> Homo sapiens

<400> 5207  
 ncggccggcc agggcagggg gcacctagga cggccccggt ccaggtggag gccgcagagg  
 60  
 gcccagggca agcagaggca gcaatggttg gtcctgacgg tggctgagcc cccagccccct  
 120  
 ggaatatgca gcccggggga gcccagaca gcggcaagga cgaggtggcg gagtggggcg  
 180  
 ggaggcatgg tctccaccta ccgggtggcc gtgctggggg cgcgaggtgt gggcaagagt  
 240  
 gccatcgtgc gccagttctt gtacaacgag ttcagcgagg tctgcgtccc caccaccgcc  
 300  
 cgccgccttt acctgcctgc tgtcgtcatg aacggccacg tgcacgacct ccagatcctc  
 360  
 gactttccac ccatcagcgc cttccctgtc aatacgtcc aggagtgggc agacacctgc  
 420  
 tgcaggggac tccggagtgt ccacgcctac atcctggtct acgacatctg ctgctttgac  
 480  
 agctttgagt acgtcaagac catccgccag cagatcctgg agacgagggt gatcggaacc  
 540  
 tcagagacgc ccatcatcat cgtgggcaac aagcgggacc tgcagcgcgg acgc  
 594

<210> 5208

<211> 136  
<212> PRT  
<213> Homo sapiens

<400> 5208  
Met Val Ser Thr Tyr Arg Val Ala Val Leu Gly Ala Arg Gly Val Gly  
1 5 10 15  
Lys Ser Ala Ile Val Arg Gln Phe Leu Tyr Asn Glu Phe Ser Glu Val  
20 25 30  
Cys Val Pro Thr Thr Ala Arg Arg Leu Tyr Leu Pro Ala Val Val Met  
35 40 45  
Asn Gly His Val His Asp Leu Gln Ile Leu Asp Phe Pro Pro Ile Ser  
50 55 60  
Ala Phe Pro Val Asn Thr Leu Gln Glu Trp Ala Asp Thr Cys Cys Arg  
65 70 75 80  
Gly Leu Arg Ser Val His Ala Tyr Ile Leu Val Tyr Asp Ile Cys Cys  
85 90 95  
Phe Asp Ser Phe Glu Tyr Val Lys Thr Ile Arg Gln Gln Ile Leu Glu  
100 105 110  
Thr Arg Val Ile Gly Thr Ser Glu Thr Pro Ile Ile Ile Val Gly Asn  
115 120 125  
Lys Arg Asp Leu Gln Arg Gly Arg  
130 135

<210> 5209  
<211> 1592  
<212> DNA  
<213> Homo sapiens

<400> 5209  
atcctgtggg gcctgaagct tgatcatctc ctggccggct tcgtggccct gatgaggtcg  
60  
gtgcctgacc cttccaccgc ggccctgcta ctctggcct tgctgaccc ctacgccctg  
120  
ctgagccggc tcaactggctc ccgagcctct ggggcccac tcgaggccaa ggtgagaggg  
180  
ctggaacgcc aggtggagga gctgcgctgg cgccagaggc gagcggccaa gggggcccgc  
240  
agtgtggagg aggagtgagc cggatgcccc acacaccgcc agtgtcatc caaagagctg  
300  
agctgcttcg gggccatgca gccctcctgc cagccccctg cccttttctt gccctgtctc  
360  
tgaaccttca gaacattgat ccttgccgca gcccactag ccaagagaaa cagagaaaga  
420  
ccattcccc tgctgtcct tgcggccctg tctctgagg ttctctgtct ggggttggtc  
480  
ctcttaacct tttctctgct ccagcctgc ctcaccaggg aaggttgag gggcctccct  
540  
ctggcttctg catctgcgcc agcaaacatc actgccgttg gtctctcatg acttaactgg  
600  
cttccctctg ctgtgcctt ggcttctctc taatgtctgt gctctcctgt ccttctgaag  
660  
ttgtcccttg gccaaatctc cagctccctt cttgttttcc tcctcctct accctgtact  
720

cccaccaaac catggtcctt taaggcacgc tcctgtcctc ctcattgccc agcagtaggg  
780  
aggggcaggg gtaaggggac ctgaggataa aggggtggga aacaggggcc cctgaggcct  
840  
gtgggggctg caggggagga ggatgtacct tgtgtctctt tcaagtgcct taatccgagc  
900  
cagcagggcc ttctgcttgc ctgctgccat actgtatgta ggaaagtgtt ctgtggctgc  
960  
tttgtgtcaa gaaaagagca gtcactctca gaatcttgat tccccatcag ccaaagcaaa  
1020  
agatggctgc tgctttgtag gcatgtgcct gcaagtggga ccttgctggg cattatatgc  
1080  
cctgtggggg tttcagagac cctgaaagag gagggaggac ccgcctcctt gtctgcacaa  
1140  
ctgcatgcac ttctctcccc atcgtctcac aacctgaaac cgagaaggag ttgctgacca  
1200  
gtgcccaccc cggcagcccg ggaggaacac aggcagctcc tttcccttca cgtggctctgc  
1260  
agagagcagg gtgagctgcc agctgcccct ctccaccagg gtaccctgtc ttggtgggta  
1320  
ggggccactt ttcctttgag gctctagtgg aggtggatgt ccttctctgc caggcttggc  
1380  
acatgatgtg aagaataaat gcccaattct tactgttcag gtttgatgtg gaatcacagc  
1440  
tgcagtgata tatatttttt atcagtgtct gggtgggttt aaataaagtg cacgctattt  
1500  
tattatcttg ttctgaataa aatgtattta ctccaaaaaa aaaaaaaaaa aaaaaaaaaa  
1560  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
1592

<210> 5210  
<211> 85  
<212> PRT  
<213> Homo sapiens

<400> 5210  
Ile Leu Trp Gly Leu Lys Leu Val Ile Phe Leu Ala Gly Phe Val Ala  
1 5 10 15  
Leu Met Arg Ser Val Pro Asp Pro Ser Thr Arg Ala Leu Leu Leu Leu  
20 25 30  
Ala Leu Leu Ile Leu Tyr Ala Leu Leu Ser Arg Leu Thr Gly Ser Arg  
35 40 45  
Ala Ser Gly Ala Gln Leu Glu Ala Lys Val Arg Gly Leu Glu Arg Gln  
50 55 60  
Val Glu Glu Leu Arg Trp Arg Gln Arg Arg Ala Ala Lys Gly Ala Arg  
65 70 75 80  
Ser Val Glu Glu Glu  
85

<210> 5211  
<211> 602  
<212> DNA  
<213> Homo sapiens

<400> 5211  
gcagttcagt ctttgattgg ttgctgagag gcggggctac tcgactgctc tggaggtagc  
60  
ggccgcggtg aggagagcca tgggacgggc agtcaagggt ttacagctct ttaaaacact  
120  
gcacaggacc agacaacaag tttttaaaaa tgatgccaga gcattagaag cagccagaat  
180  
aaagataaat gaagaattca aaaataataa aagtgaaact tcttctaaga aaatagaaga  
240  
gctaataaaa ataggttctg atgttgaatt attactcaga acatctgtta tacaaggtat  
300  
tcacacagac cacaatacac tgaaactggt ccctaggaaa gaccttcttg tagaaaatgt  
360  
gccatattgt gatgcaccaa ctcagaagca atgagttttc tagaatacaa caagtctttg  
420  
tactttttta ctttaaaatc tacaactctg gcaaaagtcc tggaaatgca gacattttcc  
480  
ctgaactggc atattgaaaa tgaatgaatt acagaatagc ttcattttta aatttcattg  
540  
taaaagggtc ttactgagaa ctaaagaaca taattaagta tttctaaagg aaattagata  
600  
ag  
602

<210> 5212  
<211> 104  
<212> PRT  
<213> Homo sapiens

<400> 5212  
Met Gly Arg Ala Val Lys Val Leu Gln Leu Phe Lys Thr Leu His Arg  
1 5 10 15  
Thr Arg Gln Gln Val Phe Lys Asn Asp Ala Arg Ala Leu Glu Ala Ala  
20 25 30  
Arg Ile Lys Ile Asn Glu Glu Phe Lys Asn Asn Lys Ser Glu Thr Ser  
35 40 45  
Ser Lys Lys Ile Glu Glu Leu Met Lys Ile Gly Ser Asp Val Glu Leu  
50 55 60  
Leu Leu Arg Thr Ser Val Ile Gln Gly Ile His Thr Asp His Asn Thr  
65 70 75 80  
Leu Lys Leu Val Pro Arg Lys Asp Leu Leu Val Glu Asn Val Pro Tyr  
85 90 95  
Cys Asp Ala Pro Thr Gln Lys Gln  
100

<210> 5213  
<211> 4387  
<212> DNA  
<213> Homo sapiens

<400> 5213  
nnccgcggag ctacggtttc ctccagaggt ctccgcccct ctgcccctat attcccagaa  
60

cccgagtctg atccgggcct tgccgggcac cctggaaagg cgggggtgat agtacagatg  
120  
gagacgcaac tgcagagcat tttcgaagag gtggtgaaaa cggaagttat agaagaggct  
180  
tttcctggca tgtttatgga tactcctgaa gatgagaaaa caaaactaat tagctgtttg  
240  
ggggccttca gacagttttg ggggtggactt tctcaggagt ctcatgaaca gtgtatccag  
300  
tggattgtta agtttattca tggtcagcat agtcctaaaa gaatttcttt tctttatgac  
360  
tgcttagcaa tggcagttga gactggcttc cttccacca ggctggtttg tgaatccctg  
420  
ataaactctg acactcttga gtgggaaaga acacagcttt gggccttaac atttaaactg  
480  
gttcggaaaa taattggggg agtggattac aagggtgttc gagatctctt aaaagtgatt  
540  
ttggagaaga ttttgacaat tcttaataca gtgagctctg ctgttgtaaca gcagcttctg  
600  
gcagcaagag aggttatagc atatatcttg gaaagaaatg cctgcttatt accagcctat  
660  
tttgagctca ctgagatcag gaaactgtat cctgaaggca aacttccaca ctggttactt  
720  
ggaaacctag tatcagactt tgtggatacc ttcaggccca cagcaaggat aaactccatt  
780  
tgtggtcgct gtagtcttct gccagttgta aataattcgg gtgccatttg taattcatgg  
840  
aaactggatc ctgctactct tcgttttctt ttgaaaggcc ttttgccata tgataaggat  
900  
ctgtttgaac cacagactgc tttgttgaga tatgtattgg agcagcctta ttcagggat  
960  
atggtctgca atatgctagg tttaaataag cagcacaagc agcgtgccc tgtgctggag  
1020  
gaccagttgg tggatctggt tgtttatgcc atggagcgat ctgagaccga ggagaagttt  
1080  
gacgatgggg gaacaagcca actcctgtgg cagcatctct caagtcagct cattttcttt  
1140  
gtgcttttcc agtttgcaag ttttccacat atggtgcttt ctcttcatca gaagttagca  
1200  
gggcgaggac tgattaaagg cagagatcat cttatgtggg ttctcctgca attcatttct  
1260  
ggaagtattc agaaaaatgc actagctgat tttctccctg tgatgaagct cttcgacttg  
1320  
ctatacccag aaaaagaata tatcccagtt cctgatatta acaaacccca gtcaacccat  
1380  
gcctttgcaa tgacctgtat ttggattcat ctcaatagaa aagctcaaaa tgacaactcc  
1440  
aagctacaga ttccaatacc tcattcccta agacttcacc atgagttcct gcagcagagt  
1500  
ctaagacata aaagtttaca gatgaatgac tataagattg ctctattgtg taatgcatac  
1560  
tctacaaatt cagaatgtgt tacattaccc atgggagctc tggtagaaac tatttatgga  
1620  
aatggaatta tgagactacc tctccctgga acaaactgta tggcttcagc atctattacc  
1680

cccttaccta tgaacctcct ggattcactg acagttcatg ccaaaatgag ccttattcac  
1740  
agcattgcaa ccagggatgat aaaacttgct catgcaaagt ccagtgtggc cttggctcca  
1800  
gccctagtgg aaacttacag tcgtttattg gtctatatgg aaatagagtc tttgggcatc  
1860  
aaaggattta tcagtcagct tttgccaaact gtgttcaaact cacatgcatg ggggatctta  
1920  
cacacactcc ttgagatggt tagctaccgg atgcatcata ttcagcctca ttacagagtt  
1980  
cagctcctga gtcattctta tactttggct gcagttgcac aaacaaacca gaaccagctc  
2040  
catctttgtg tcgagagcac tgctctcagg cttataacag cattaggtag ctgagaggta  
2100  
caaccgcagt ttacacgctt ccttagtgat cccaaaacag tgctctcagc agaattctgaa  
2160  
gaactgaacc gagccttgat attgaccttg gctagagcaa ctcatgtaac agattttttt  
2220  
acaggctctg attcaattca gggaaacttg tgtaaagaca tacttcagac catcatgagt  
2280  
ttcactcctc ataattgggc ttcacacacc ctgagctggt ttccaggccc actacaggca  
2340  
ttcttcaaac aaaataatgt gcctcaggaa agccgtttta atctgaaaaa aaatgtggag  
2400  
gaggagtata ggaagtggaa gtcaatgagc aacgaaaacg acattattac ccacttctct  
2460  
atgcaggggt cccctcctct ctttctttgt cttctctgga aaatgctctt ggaaacagat  
2520  
catattaatc agattggcta tagagtatta gagagaattg gagccagggc cttggtagcc  
2580  
catgtgagga catttgaga tttcctggta tatgagtttt ctacatcagc aggggggtcag  
2640  
caactcaata aatgcattga aattcttaat gacatggtat ggaagtataa cattgttaca  
2700  
ctggacagat taattctctg cctggccatg cgtagtcacg aaggaaatga agcccagggt  
2760  
tgttatttca taattcagtt gctgttactc aaaccaaacg attttagaaa tcgagtaagt  
2820  
gactttgtga aggaaaattc ccagagcac tggttacaga atgactggca caccaagcac  
2880  
atgaattatc acaagaaata tccagagaag ttgtattttg agggcctcgc ggaacagggt  
2940  
gacccctctg tacagatcca gtctccctat ctgcccctct attttgggaa tgtgtgtctt  
3000  
cgattccttc cagtatttga tatagtaatc cacagatttt tagagttgct tccggtatcc  
3060  
aaatcactgg agactctact ggatcatcta ggaggcttat ataaatttca tgatcgtcca  
3120  
gtgacttata tgtataacac tctgcactat tatgaaatgc acctgagaga ccgcgcattt  
3180  
ctcaaacgaa aactcgtcca tgcgatcatt ggctctctga aggataatcg accgcagggc  
3240  
tggtgtctaa gtgacactta cctgaaatgc gctatgaatg cacgagagga aaatccttgg  
3300

gttccagatg acacctacta ttgcagattg attggcagac tagtcgatac gatggctggc  
 3360  
 aaatctcctg gtccctttcc aaactgtgac tggagattca atgagtttcc caaccagct  
 3420  
 gcccattgctc tccatgttac ttgtgtggag ctcattggcct tggcagtttc aggcaaagaa  
 3480  
 gttgggaatg cccttctaaa tgttgccta aaaagtcagc ctttagtgcc aagagagaac  
 3540  
 attacagcat ggatgaatgc aattggtttg atcatcactg ccctaccaga gccatattgg  
 3600  
 attgttcttc atgatcgaat tgtgagtgtc atcagcagcc ccagcttgac gtctgaaaca  
 3660  
 gagtgggttg gctatccatt ccgcctcttt gatttcactg cctgtcatca gtctactct  
 3720  
 gagatgagtt gtagctatac gttagctctt gcacatgctg tgtggcacca ttctagcatc  
 3780  
 ggacaacttt ctctcattcc aaagtctctt actgaagtac ttcttccat agtgaagacc  
 3840  
 gaattccagt tgctttatgt ataccatctt gttggaccat ttttacaag atttcagcaa  
 3900  
 gagagaactc gttgtatgat agagattggg gtggcgtttt atgacatgct gctgaatgtt  
 3960  
 gaccagtgtg gcacccattt aaattacatg gatcccatct gtgacttctt ctatcacatg  
 4020  
 aagtatatgt ttactggtga cagcgtgaaa gagcaagtag agaagattat ctgtaactta  
 4080  
 aaaccagctt taaaacttcg tcttcgattc atcacacaca ttagcaagat ggagccagct  
 4140  
 gcagtgcctc cacaagccat gaacagtggg tctccagcac ctcagtctaa tcagggtgac  
 4200  
 actctcacct gacagatgat gtaattcttc aatttttata atcttaaaat ttttaaattt  
 4260  
 tatatttgta aatacagtac acattttatt tcttggattt tgagagacat tgttaatttt  
 4320  
 gggggaattg gcattgcgaa agacttgaaa actaatgagt aaagtctgct gaatgaataa  
 4380  
 accaaaa  
 4387

&lt;210&gt; 5214

&lt;211&gt; 1364

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5214

Met	Glu	Thr	Gln	Leu	Gln	Ser	Ile	Phe	Glu	Glu	Val	Val	Lys	Thr	Glu
1				5				10					15		
Val	Ile	Glu	Glu	Ala	Phe	Pro	Gly	Met	Phe	Met	Asp	Thr	Pro	Glu	Asp
			20				25					30			
Glu	Lys	Thr	Lys	Leu	Ile	Ser	Cys	Leu	Gly	Ala	Phe	Arg	Gln	Phe	Trp
			35				40				45				
Gly	Gly	Leu	Ser	Gln	Glu	Ser	His	Glu	Gln	Cys	Ile	Gln	Trp	Ile	Val
			50				55			60					
Lys	Phe	Ile	His	Gly	Gln	His	Ser	Pro	Lys	Arg	Ile	Ser	Phe	Leu	Tyr



65		70		75		80									
Asp	Cys	Leu	Ala	Met	Ala	Val	Glu	Thr	Gly	Leu	Leu	Pro	Pro	Arg	Leu
		85							90					95	
Val	Cys	Glu	Ser	Leu	Ile	Asn	Ser	Asp	Thr	Leu	Glu	Trp	Glu	Arg	Thr
		100						105					110		
Gln	Leu	Trp	Ala	Leu	Thr	Phe	Lys	Leu	Val	Arg	Lys	Ile	Ile	Gly	Gly
		115					120					125			
Val	Asp	Tyr	Lys	Gly	Val	Arg	Asp	Leu	Leu	Lys	Val	Ile	Leu	Glu	Lys
	130					135					140				
Ile	Leu	Thr	Ile	Pro	Asn	Thr	Val	Ser	Ser	Ala	Val	Val	Gln	Gln	Leu
145				150						155					160
Leu	Ala	Ala	Arg	Glu	Val	Ile	Ala	Tyr	Ile	Leu	Glu	Arg	Asn	Ala	Cys
			165						170				175		
Leu	Leu	Pro	Ala	Tyr	Phe	Ala	Val	Thr	Glu	Ile	Arg	Lys	Leu	Tyr	Pro
		180						185					190		
Glu	Gly	Lys	Leu	Pro	His	Trp	Leu	Leu	Gly	Asn	Leu	Val	Ser	Asp	Phe
	195						200					205			
Val	Asp	Thr	Phe	Arg	Pro	Thr	Ala	Arg	Ile	Asn	Ser	Ile	Cys	Gly	Arg
	210					215					220				
Cys	Ser	Leu	Leu	Pro	Val	Val	Asn	Asn	Ser	Gly	Ala	Ile	Cys	Asn	Ser
225				230						235					240
Trp	Lys	Leu	Asp	Pro	Ala	Thr	Leu	Arg	Phe	Pro	Leu	Lys	Gly	Leu	Leu
			245						250				255		
Pro	Tyr	Asp	Lys	Asp	Leu	Phe	Glu	Pro	Gln	Thr	Ala	Leu	Leu	Arg	Tyr
		260						265					270		
Val	Leu	Glu	Gln	Pro	Tyr	Ser	Arg	Asp	Met	Val	Cys	Asn	Met	Leu	Gly
	275						280					285			
Leu	Asn	Lys	Gln	His	Lys	Gln	Arg	Cys	Pro	Val	Leu	Glu	Asp	Gln	Leu
	290				295					300					
Val	Asp	Leu	Val	Val	Tyr	Ala	Met	Glu	Arg	Ser	Glu	Thr	Glu	Glu	Lys
305				310						315					320
Phe	Asp	Asp	Gly	Gly	Thr	Ser	Gln	Leu	Leu	Trp	Gln	His	Leu	Ser	Ser
			325						330				335		
Gln	Leu	Ile	Phe	Phe	Val	Leu	Phe	Gln	Phe	Ala	Ser	Phe	Pro	His	Met
		340						345					350		
Val	Leu	Ser	Leu	His	Gln	Lys	Leu	Ala	Gly	Arg	Gly	Leu	Ile	Lys	Gly
	355						360					365			
Arg	Asp	His	Leu	Met	Trp	Val	Leu	Leu	Gln	Phe	Ile	Ser	Gly	Ser	Ile
	370					375					380				
Gln	Lys	Asn	Ala	Leu	Ala	Asp	Phe	Leu	Pro	Val	Met	Lys	Leu	Phe	Asp
385				390						395					400
Leu	Leu	Tyr	Pro	Glu	Lys	Glu	Tyr	Ile	Pro	Val	Pro	Asp	Ile	Asn	Lys
			405					410					415		
Pro	Gln	Ser	Thr	His	Ala	Phe	Ala	Met	Thr	Cys	Ile	Trp	Ile	His	Leu
		420						425					430		
Asn	Arg	Lys	Ala	Gln	Asn	Asp	Asn	Ser	Lys	Leu	Gln	Ile	Pro	Ile	Pro
	435					440					445				
His	Ser	Leu	Arg	Leu	His	His	Glu	Phe	Leu	Gln	Gln	Ser	Leu	Arg	His
	450					455				460					
Lys	Ser	Leu	Gln	Met	Asn	Asp	Tyr	Lys	Ile	Ala	Leu	Leu	Cys	Asn	Ala
465				470						475					480
Tyr	Ser	Thr	Asn	Ser	Glu	Cys	Val	Thr	Leu	Pro	Met	Gly	Ala	Leu	Val
			485					490					495		
Glu	Thr	Ile	Tyr	Gly	Asn	Gly	Ile	Met	Arg	Leu	Pro	Leu	Pro	Gly	Thr

			500					505						510			
Asn	Cys	Met	Ala	Ser	Ala	Ser	Ile	Thr	Pro	Leu	Pro	Met	Asn	Leu	Leu		
		515						520				525					
Asp	Ser	Leu	Thr	Val	His	Ala	Lys	Met	Ser	Leu	Ile	His	Ser	Ile	Ala		
		530					535					540					
Thr	Arg	Val	Ile	Lys	Leu	Ala	His	Ala	Lys	Ser	Ser	Val	Ala	Leu	Ala		
545					550					555					560		
Pro	Ala	Leu	Val	Glu	Thr	Tyr	Ser	Arg	Leu	Leu	Val	Tyr	Met	Glu	Ile		
				565					570					575			
Glu	Ser	Leu	Gly	Ile	Lys	Gly	Phe	Ile	Ser	Gln	Leu	Leu	Pro	Thr	Val		
		580						585					590				
Phe	Lys	Ser	His	Ala	Trp	Gly	Ile	Leu	His	Thr	Leu	Leu	Glu	Met	Phe		
		595					600					605					
Ser	Tyr	Arg	Met	His	His	Ile	Gln	Pro	His	Tyr	Arg	Val	Gln	Leu	Leu		
	610					615					620						
Ser	His	Leu	His	Thr	Leu	Ala	Ala	Val	Ala	Gln	Thr	Asn	Gln	Asn	Gln		
625					630					635					640		
Leu	His	Leu	Cys	Val	Glu	Ser	Thr	Ala	Leu	Arg	Leu	Ile	Thr	Ala	Leu		
			645						650					655			
Gly	Ser	Ser	Glu	Val	Gln	Pro	Gln	Phe	Thr	Arg	Phe	Leu	Ser	Asp	Pro		
		660						665					670				
Lys	Thr	Val	Leu	Ser	Ala	Glu	Ser	Glu	Glu	Leu	Asn	Arg	Ala	Leu	Ile		
		675					680					685					
Leu	Thr	Leu	Ala	Arg	Ala	Thr	His	Val	Thr	Asp	Phe	Phe	Thr	Gly	Ser		
	690					695					700						
Asp	Ser	Ile	Gln	Gly	Thr	Trp	Cys	Lys	Asp	Ile	Leu	Gln	Thr	Ile	Met		
705					710					715					720		
Ser	Phe	Thr	Pro	His	Asn	Trp	Ala	Ser	His	Thr	Leu	Ser	Cys	Phe	Pro		
			725						730					735			
Gly	Pro	Leu	Gln	Ala	Phe	Phe	Lys	Gln	Asn	Asn	Val	Pro	Gln	Glu	Ser		
		740					745						750				
Arg	Phe	Asn	Leu	Lys	Lys	Asn	Val	Glu	Glu	Glu	Tyr	Arg	Lys	Trp	Lys		
	755					760						765					
Ser	Met	Ser	Asn	Glu	Asn	Asp	Ile	Ile	Thr	His	Phe	Ser	Met	Gln	Gly		
	770					775					780						
Ser	Pro	Pro	Leu	Phe	Leu	Cys	Leu	Leu	Trp	Lys	Met	Leu	Leu	Glu	Thr		
785					790					795					800		
Asp	His	Ile	Asn	Gln	Ile	Gly	Tyr	Arg	Val	Leu	Glu	Arg	Ile	Gly	Ala		
			805						810					815			
Arg	Ala	Leu	Val	Ala	His	Val	Arg	Thr	Phe	Ala	Asp	Phe	Leu	Val	Tyr		
			820					825									

930 935 940  
Val Gln Ile Gln Ser Pro Tyr Leu Pro Ile Tyr Phe Gly Asn Val Cys  
945 950 955 960  
Leu Arg Phe Leu Pro Val Phe Asp Ile Val Ile His Arg Phe Leu Glu  
965 970 975  
Leu Leu Pro Val Ser Lys Ser Leu Glu Thr Leu Leu Asp His Leu Gly  
980 985 990  
Gly Leu Tyr Lys Phe His Asp Arg Pro Val Thr Tyr Leu Tyr Asn Thr  
995 1000 1005  
Leu His Tyr Tyr Glu Met His Leu Arg Asp Arg Ala Phe Leu Lys Arg  
1010 1015 1020  
Lys Leu Val His Ala Ile Ile Gly Ser Leu Lys Asp Asn Arg Pro Gln  
1025 1030 1035 1040  
Gly Trp Cys Leu Ser Asp Thr Tyr Leu Lys Cys Ala Met Asn Ala Arg  
1045 1050 1055  
Glu Glu Asn Pro Trp Val Pro Asp Asp Thr Tyr Tyr Cys Arg Leu Ile  
1060 1065 1070  
Gly Arg Leu Val Asp Thr Met Ala Gly Lys Ser Pro Gly Pro Phe Pro  
1075 1080 1085  
Asn Cys Asp Trp Arg Phe Asn Glu Phe Pro Asn Pro Ala Ala His Ala  
1090 1095 1100  
Leu His Val Thr Cys Val Glu Leu Met Ala Leu Ala Val Ser Gly Lys  
1105 1110 1115 1120  
Glu Val Gly Asn Ala Leu Leu Asn Val Val Leu Lys Ser Gln Pro Leu  
1125 1130 1135  
Val Pro Arg Glu Asn Ile Thr Ala Trp Met Asn Ala Ile Gly Leu Ile  
1140 1145 1150  
Ile Thr Ala Leu Pro Glu Pro Tyr Trp Ile Val Leu His Asp Arg Ile  
1155 1160 1165  
Val Ser Val Ile Ser Ser Pro Ser Leu Thr Ser Glu Thr Glu Trp Val  
1170 1175 1180  
Gly Tyr Pro Phe Arg Leu Phe Asp Phe Thr Ala Cys His Gln Ser Tyr  
1185 1190 1195 1200  
Ser Glu Met Ser Cys Ser Tyr Thr Leu Ala Leu Ala His Ala Val Trp  
1205 1210 1215  
His His Ser Ser Ile Gly Gln Leu Ser Leu Ile Pro Lys Phe Leu Thr  
1220 1225 1230  
Glu Val Leu Leu Pro Ile Val Lys Thr Glu Phe Gln Leu Leu Tyr Val  
1235 1240 1245  
Tyr His Leu Val Gly Pro Phe Leu Gln Arg Phe Gln Gln Glu Arg Thr  
1250 1255 1260  
Arg Cys Met Ile Glu Ile Gly Val Ala Phe Tyr Asp Met Leu Leu Asn  
1265 1270 1275 1280  
Val Asp Gln Cys Ser Thr His Leu Asn Tyr Met Asp Pro Ile Cys Asp  
1285 1290 1295  
Phe Leu Tyr His Met Lys Tyr Met Phe Thr Gly Asp Ser Val Lys Glu  
1300 1305 1310  
Gln Val Glu Lys Ile Ile Cys Asn Leu Lys Pro Ala Leu Lys Leu Arg  
1315 1320 1325  
Leu Arg Phe Ile Thr His Ile Ser Lys Met Glu Pro Ala Ala Val Pro  
1330 1335 1340  
Pro Gln Ala Met Asn Ser Gly Ser Pro Ala Pro Gln Ser Asn Gln Val  
1345 1350 1355 1360  
Asp Thr Leu Thr

<210> 5215  
 <211> 548  
 <212> DNA  
 <213> Homo sapiens

<400> 5215  
 nacgcgtgat ccatgggagg aggtaacatg tcaggatgag cggaagtttg gaagaagttg  
 60  
 gtcccaggcc tgaaagatca ctgtgagggg tcaggacttc agtggaggag ggactgtaga  
 120  
 ggttttagaa gcagcaagag aactagaatg agaaggactt ggagatgtga ctgcattgtc  
 180  
 gctgtctcgc gagaaaactt taacacgtga ggagttgcct ctgaaggggtg agcaggggag  
 240  
 ttgcttcagt tgcgctctag tcccagtga gattctgtga acctgggggt aatgaggaca  
 300  
 aagaacttgg aacagcccgg aacctcggtt gatgaagccg cggccgggnt tgagaggacc  
 360  
 gactgcagtt ctgaaagacg ttctgctgtg ggttcaatgc tatcagacag catcacgccc  
 420  
 cacagagaaa tctttcatga aaggaagagt ccatcgtgtg ggccaacttt tttgtggtca  
 480  
 tagtttaaga agttgcccc aacctccagca gccaccgccc caacgagtca gccgccgtcc  
 540  
 acattgag  
 548

<210> 5216  
 <211> 83  
 <212> PRT  
 <213> Homo sapiens

<400> 5216  
 Ala Gly Glu Leu Leu Gln Leu Arg Ser Ser Pro Ser Glu Asp Ser Val  
 1 5 10 15  
 Asn Leu Gly Val Met Arg Thr Lys Asn Leu Glu Gln Pro Gly Thr Ser  
 20 25 30  
 Val Asp Glu Ala Ala Ala Gly Xaa Glu Arg Thr Asp Cys Ser Ser Glu  
 35 40 45  
 Arg Arg Ser Ala Val Gly Ser Met Leu Ser Asp Ser Ile Thr Pro His  
 50 55 60  
 Arg Glu Ile Phe His Glu Arg Lys Ser Pro Ser Leu Trp Pro Thr Phe  
 65 70 75 80  
 Leu Trp Ser

<210> 5217  
 <211> 4189  
 <212> DNA  
 <213> Homo sapiens

<400> 5217

atcagtaaaa tggggagaaa ttccaagcac acttctcaga gcagagcaga agaggttgac  
60  
tatggagagg agaatgaaga tgggaccaca ggtgagcccc gggtgcccac ttactgcagc  
120  
ccccactggc gcaggctgcc ccaggccctg tgcagacaca ccaggccctc agccgcagcc  
180  
catggacctg cgggtgccag cggccccagc tggagcccc accagagccc acattgctgg  
240  
ccctgcagcg tccccagcgc ctgcaccacc acctcttctc agcaggcctg cagcagcagc  
300  
gctcgggtgga gcccatgagg ctctccatgg acacgccgat gcccgagttg cagggtgggac  
360  
cccaggaaca acagctgcgg cagcttctcc acaaggacaa gagcaagcga agtgctgtag  
420  
ccagcagcgt ggtcaagcag aagctagcgg aggtgattct gaaaaaacag caggcggccc  
480  
tagaaagaac agtccatccc aacagccccg gcattcccta cagaaccctg gagccccctg  
540  
agacggaagg agccaccgc tccatgctca gcagcttttt gcctcctgtt cccagcctgc  
600  
ccagtgacct cccagagcac ttccctctgc gcaagacagt ctctgagccc aacctgaagc  
660  
tgcgctataa gcccaagaag tccctggagc ggaggaagaa tccactgctc cgaaaggaga  
720  
gtgcgcccc cagcctccgg cggcggcccc cagagaccct cggagactcc tccccagta  
780  
gtagcagcac gcccgcatca ggatgcagct cccccaatga cagcgagcac ggccccaatc  
840  
ccatcctggg ctccggaggc ctcttgggccc agcggctgcg gctgcaggag acttctgtgg  
900  
ccccgttcgc cttgccgaca gtgtccttgc tgcccgcaat cactctgggg ctgcccggcc  
960  
ctgccagggc tgacagtgac cgcaggacct atccgactct gggccctcgg gggccaatcc  
1020  
tggggagccc ccacactccc ctcttccctgc cccatggctt ggagcccgag gctgggggca  
1080  
ccttgccctc tcgcctgcag cccattctcc tccctggacct ctcaggctct catgccccgc  
1140  
tgctgactgt gcccgggctt gggcccttgc ccttccactt tgcccagtc ttaatgacca  
1200  
ccgagcggct ctctgggtca ggcctccact ggccactgag ccggactcgc tcagagcccc  
1260  
tgccccccag tgccaccgct cccccaccgc cgggccccat gcagccccgc ctggagcagc  
1320  
tcaaaactca cgtccagggt atcaagaggt cagccaagcc gagtgagaag ccccggtgc  
1380  
ggcagatacc ctccgctgaa gacctggaga cagatggcgg gggaccgggc cagggtggtg  
1440  
acgatggcct ggagcacagg gagctgggccc atgggcagcc tgaggccaga ggccccgctc  
1500  
ctctccagca gcaccctcag gtgttgctct gggaacagca gcgactggct gggcggctcc  
1560  
cccggggcag caccggggac actgtgctgc ttcctctggc ccagggtggg caccggcctc  
1620

tgtcccgggc tcagtcttcc ccagccgcac ctgcctcact gtcagcccca gagcctgcca  
1680  
gcnaggccc gagtcctctc cagctcagag acccctgcca ggaccctgcc cttcaccaca  
1740  
gggctgatct atgactcggc catgctgaag caccagtgtc cctgcggtga caacagcagg  
1800  
caccggagc acgcccggcg catccagagc atctgggtccc ggctgcagga gcgggggctc  
1860  
cggagccagt gtgagtgtct ccgaggccgg aaggcctccc tggaagagct gcagtcggtc  
1920  
cactctgagc ggcacgtgct cctctacggc accaaccgc tcagccgcct caaactggac  
1980  
aacgggaagc tggcagggct cctggcacag cggatgtttg tgatgctgcc ctgtggtggg  
2040  
gttgggtgg acactgacac catctggaat gagcttcatt cctccaatgc agcccgtgg  
2100  
gccgctggca gtgtcactga cctcgccttc aaagtggctt ctcgtgagct aaagaatggt  
2160  
ttcgtgtgg tgcggccccc aggacaccat gcagatcatt caacagccat gggcttctgc  
2220  
ttcttcaact cagtggccat cgcctgccgg cagctgcaac agcagagcaa ggccagcaag  
2280  
atcctcattg tagactggga cgtgcaccat ggcaacgcca ccagcaaac cttctaccaa  
2340  
gacccagtg tgctctacat ctccctgcat cgccatgacg acggcaactt cttcccgggg  
2400  
agtggggctg tggatgaggt aggggctggc agcggtgagg gcttcaatgt caatgtggcc  
2460  
tgggctggag gtctggaccc ccccatgggg gatcctgagt acctggctgc tttcaggata  
2520  
gtcgtgatgc ccatcgcccg agagttctct ccagacctag tcctgggtgtc tgctggattt  
2580  
gatgtgtctg agggtcaccc ggccccactg ggtggctacc atgtttctgc caaatgtttt  
2640  
ggatacatga cgcagcaact gatgaacctg gcaggaggcg cagtgggtgtc ggccttggag  
2700  
ggtggccatg acctcacagc catctgtgac gcctctgagg cctgtgtggc tgctcttctg  
2760  
ggtaacaggg tggatcccct ttcagaagaa ggctggaaac agaaacccaa cctcaatgcc  
2820  
atccgtcttc tggaggccgt gatccgggtg cacagtaaact actggggctg catgcagcgc  
2880  
ctggcctcct gtccagactc ctgggtgcct agagtgccag gggctgacaa agaagaagtg  
2940  
gaggcagtga ccgactggc gtccctctct gtgggcatcc tggctgaaga taggccctcg  
3000  
gagcagctgg tggaggagga agaacctatg aatctctaag gctctggaac catctgcccg  
3060  
cccaccatgc ccttgggacc tggttctctt ctaaccctg gcaatagccc ccattcctgg  
3120  
gtcttttagag atcctgtggg caagtagttg gaaccagaga acagcctgcc tgctttgaca  
3180  
gttatcccag ggagcgtgag aaaatccctg ggtctagaat gggaactgga gaggaccctg  
3240

agaggagacg ggctgggcgg cgacccccac agggctctcg agaacagatt ctcccccca  
 3300  
 gtatgggccc tggtgtggc cccattcct caggactgca cagaggagga ctggctccgg  
 3360  
 ctccgtcggg ctcaccctta accactattc ctggctctgc aaaccccaga ctttgacac  
 3420  
 agccccaggc tccacacaga aatgtgaact tggcctcaga caggctggcc cttcctaggc  
 3480  
 tctaggggct aggggggagt ggggagccaa gaggtcccat attcctgagt gcaggggtag  
 3540  
 tccctctcac ctgcttctc agacgactct ggaagcttcc ctctaccacc gggcactgag  
 3600  
 acgaagctcc ctgacagccg agactggcag ccctccatct ggtccgtacc ctgcccagag  
 3660  
 gccccctac atcaacctcc tggcgatgcc ctgggtggagc agatgggtgc tctgggagtc  
 3720  
 ctgtgcttcc tgatccaatg gtgccaaacc cttcatctcc ccagaagcg cagcataccc  
 3780  
 ctgggacccc tcggccactg cccactcggg gagccttctc tgtttctggg gcctccccc  
 3840  
 ccatagctct gattcccacc ccacatagga atagcctgac tgagggggaa ggggtgggag  
 3900  
 agaagataca gacatggagg aggggaggct gctctggcaa agtcttcaag gcttttgggg  
 3960  
 gtccaggcct ggggtcaaga aggaaaatgt gtgtgagcat gtgtgtgagt gaggcgtgtg  
 4020  
 tgtgagcgtg tgtgtgagtg aggcgtgtgt gtgtgtcttt cctaggaccc accataccct  
 4080  
 gtgtatgtat gcatgttttt gtaaaaagga agaaaatgga aaaaaatctg aacaataaat  
 4140  
 gttttatttg ctttaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 4189

&lt;210&gt; 5218

&lt;211&gt; 541

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5218

Met	Ala	Gly	Asp	Arg	Ala	Arg	Trp	Trp	Thr	Met	Ala	Trp	Ser	Thr	Gly
1				5					10					15	
Ser	Trp	Ala	Met	Gly	Ser	Leu	Arg	Pro	Glu	Ala	Pro	Leu	Leu	Ser	Ser
			20					25					30		
Ser	Thr	Leu	Arg	Cys	Cys	Ser	Gly	Asn	Ser	Ser	Asp	Trp	Leu	Gly	Gly
		35					40					45			
Ser	Pro	Gly	Ala	Ala	Pro	Gly	Thr	Leu	Cys	Cys	Phe	Leu	Trp	Pro	Arg
	50					55					60				
Val	Gly	Thr	Gly	Leu	Cys	Pro	Gly	Leu	Ser	Leu	Pro	Gln	Pro	His	Leu
65				70					75					80	
Pro	His	Cys	Gln	Pro	Gln	Ser	Leu	Pro	Ala	Xaa	Ala	Arg	Val	Leu	Ser
			85					90					95		
Ser	Ser	Glu	Thr	Pro	Ala	Arg	Thr	Leu	Pro	Phe	Thr	Thr	Gly	Leu	Ile
		100						105					110		
Tyr	Asp	Ser	Val	Met	Leu	Lys	His	Gln	Cys	Ser	Cys	Gly	Asp	Asn	Ser

115 120 125  
Arg His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser Arg Leu  
130 135 140  
Gln Glu Arg Gly Leu Arg Ser Gln Cys Glu Cys Leu Arg Gly Arg Lys  
145 150 155 160  
Ala Ser Leu Glu Glu Leu Gln Ser Val His Ser Glu Arg His Val Leu  
165 170 175  
Leu Tyr Gly Thr Asn Pro Leu Ser Arg Leu Lys Leu Asp Asn Gly Lys  
180 185 190  
Leu Ala Gly Leu Leu Ala Gln Arg Met Phe Val Met Leu Pro Cys Gly  
195 200 205  
Gly Val Gly Val Asp Thr Asp Thr Ile Trp Asn Glu Leu His Ser Ser  
210 215 220  
Asn Ala Ala Arg Trp Ala Ala Gly Ser Val Thr Asp Leu Ala Phe Lys  
225 230 235 240  
Val Ala Ser Arg Glu Leu Lys Asn Gly Phe Ala Val Val Arg Pro Pro  
245 250 255  
Gly His His Ala Asp His Ser Thr Ala Met Gly Phe Cys Phe Phe Asn  
260 265 270  
Ser Val Ala Ile Ala Cys Arg Gln Leu Gln Gln Gln Ser Lys Ala Ser  
275 280 285  
Lys Ile Leu Ile Val Asp Trp Asp Val His His Gly Asn Ala Thr Gln  
290 295 300  
Gln Thr Phe Tyr Gln Asp Pro Ser Val Leu Tyr Ile Ser Leu His Arg  
305 310 315 320  
His Asp Asp Gly Asn Phe Phe Pro Gly Ser Gly Ala Val Asp Glu Val  
325 330 335  
Gly Ala Gly Ser Gly Glu Gly Phe Asn Val Asn Val Ala Trp Ala Gly  
340 345 350  
Gly Leu Asp Pro Pro Met Gly Asp Pro Glu Tyr Leu Ala Ala Phe Arg  
355 360 365  
Ile Val Val Met Pro Ile Ala Arg Glu Phe Ser Pro Asp Leu Val Leu  
370 375 380  
Val Ser Ala Gly Phe Asp Ala Ala Glu Gly His Pro Ala Pro Leu Gly  
385 390 395 400  
Gly Tyr His Val Ser Ala Lys Cys Phe Gly Tyr Met Thr Gln Gln Leu  
405 410 415  
Met Asn Leu Ala Gly Gly Ala Val Val Leu Ala Leu Glu Gly Gly His  
420 425 430  
Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ala Ala Leu  
435 440 445  
Leu Gly Asn Arg Val Asp Pro Leu Ser Glu Glu Gly Trp Lys Gln Lys  
450 455 460  
Pro Asn Leu Asn Ala Ile Arg Ser Leu Glu Ala Val Ile Arg Val His  
465 470 475 480  
Ser Lys Tyr Trp Gly Cys Met Gln Arg Leu Ala Ser Cys Pro Asp Ser  
485 490 495  
Trp Val Pro Arg Val Pro Gly Ala Asp Lys Glu Glu Val Glu Ala Val  
500 505 510  
Thr Ala Leu Ala Ser Leu Ser Val Gly Ile Leu Ala Glu Asp Arg Pro  
515 520 525  
Ser Glu Gln Leu Val Glu Glu Glu Glu Pro Met Asn Leu  
530 535 540



<210> 5219  
<211> 1212  
<212> DNA  
<213> Homo sapiens

<400> 5219  
nnagagactt tcgcttccgg ctgccgcacg cttcgctggt gcaggtaage tccgcacact  
60  
ctcggccggt cccgagtcgg actccctcaa gggtgacgcg agctctgccc tttaaccgga  
120  
aacgtctccc tgctcacccc acccccgcg c agacgcagtg ctgagcacac agctaccgga  
180  
caaagagtga cgcccgagc tggagttatg gcggctacgg agccgatctt ggcggccact  
240  
gggagtcccc cgggcgtgcc accggagaaa ctggaaggag ccggttcgag ctcagcccct  
300  
gagcgtaact gtgtgggctc ctcgctgcca gaggcctcac cgctgcccc tgagccttcc  
360  
agtcccaacg ccgcggtccc tgaagccatc cctacgcccc gagctgcggc ctccgcggcc  
420  
ctggagctgc ctctcgggcc cgcaccctg agcgtagcgc ctcaggccga agctgaagcg  
480  
cgctccacac caggccccgc cggctctaga ctcggtcccc agacgttccg ccagcgtttc  
540  
cggcagttcc gctaccagga tgcggcgggt ccccgggagg ctttcgggca gctgcgggag  
600  
ctgtcccgcg agtggctgcg gcctgacatc cgcaccaagg agcagatcgt ggagatgctg  
660  
gtgcaagagc agctgctcgc catcctgccc gaggcggctc gggcccggcg gatccgcccg  
720  
cgcacggatg tgcgcacac tggctgagcg gtggagctgc gggcggccag ggccgggcgc  
780  
tctgtgcgga ctggggccat gatcggggcc gggggcctga gcctgggacc ccaccccgctg  
840  
ttaatgaaaa atgagttttg gcagcgcctg tggctctggtg tgtctctttc attcgttctt  
900  
attgggttta ttttaccag cctgtttcct accgcctttc tggctggtgg cgaaacgaag  
960  
ttgggagtcc gtaacaataa ggccttcggt ggctatagtg ggatctttag atgttgactg  
1020  
aacctaggtt atccctctac cacacatggg aagtttttca cctgggctcc caaggacca  
1080  
cttgggtttc ttacacgcaa aatagctggc tctattaaat gctcacttaa ctggctacct  
1140  
ctataccaat atgggcacca acttgacact gccctttggg tacaggcttc ccacaatgtc  
1200  
cnagttactg gg  
1212

<210> 5220  
<211> 179  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 5220

Met Ala Ala Thr Glu Pro Ile Leu Ala Ala Thr Gly Ser Pro Ala Ala  
 1 5 10 15  
 Val Pro Pro Glu Lys Leu Glu Gly Ala Gly Ser Ser Ser Ala Pro Glu  
 20 25 30  
 Arg Asn Cys Val Gly Ser Ser Leu Pro Glu Ala Ser Pro Pro Ala Pro  
 35 40 45  
 Glu Pro Ser Ser Pro Asn Ala Ala Val Pro Glu Ala Ile Pro Thr Pro  
 50 55 60  
 Arg Ala Ala Ala Ser Ala Ala Leu Glu Leu Pro Leu Gly Pro Ala Pro  
 65 70 75 80  
 Val Ser Val Ala Pro Gln Ala Glu Ala Glu Ala Arg Ser Thr Pro Gly  
 85 90 95  
 Pro Ala Gly Ser Arg Leu Gly Pro Glu Thr Phe Arg Gln Arg Phe Arg  
 100 105 110  
 Gln Phe Arg Tyr Gln Asp Ala Ala Gly Pro Arg Glu Ala Phe Arg Gln  
 115 120 125  
 Leu Arg Glu Leu Ser Arg Gln Trp Leu Arg Pro Asp Ile Arg Thr Lys  
 130 135 140  
 Glu Gln Ile Val Glu Met Leu Val Gln Glu Gln Leu Leu Ala Ile Leu  
 145 150 155 160  
 Pro Glu Ala Ala Arg Ala Arg Arg Ile Arg Arg Arg Thr Asp Val Arg  
 165 170 175  
 Ile Thr Gly

&lt;210&gt; 5221

&lt;211&gt; 497

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5221

ntccggaccc tccaagtggg gaccctgggtg gagccccag aaccatgtgc cgagcccgct  
 60  
 gcttttggag acacgcttca catacactac acgggaagct tggtagatgg acgtattatt  
 120  
 gacacctccc tgaccagaga ccctctgggt atagaacttg gccaaaagca ggtgattcca  
 180  
 ggtctggagc agagtcttct cgacatgtgt gtgggagaga agcgaagggc aatcattcct  
 240  
 tctcacttgg cctatggaaa acggggattt ccaccatctg tcccaggagc taaagacaac  
 300  
 ctgatgaggc cacctggcat gacctccagc agccagtaac ttgttaggga agagacctgc  
 360  
 ttgggccaca tgggtctgct gcctgtgcca ccacctttcc cagaacactg gacttctttc  
 420  
 ctgccctttt ctacaactct acgctgtgtc agctgtacag ccacccccca ccccttcctt  
 480  
 tcagccacca tctgtcc  
 497

&lt;210&gt; 5222

&lt;211&gt; 112

&lt;212&gt; PRT

<213> Homo sapiens

<400> 5222

```

Xaa Arg Thr Leu Gln Val Glu Thr Leu Val Glu Pro Pro Glu Pro Cys
 1           5           10           15
Ala Glu Pro Ala Ala Phe Gly Asp Thr Leu His Ile His Tyr Thr Gly
      20           25           30
Ser Leu Val Asp Gly Arg Ile Ile Asp Thr Ser Leu Thr Arg Asp Pro
      35           40           45
Leu Val Ile Glu Leu Gly Gln Lys Gln Val Ile Pro Gly Leu Glu Gln
      50           55           60
Ser Leu Leu Asp Met Cys Val Gly Glu Lys Arg Arg Ala Ile Ile Pro
65           70           75           80
Ser His Leu Ala Tyr Gly Lys Arg Gly Phe Pro Pro Ser Val Pro Gly
      85           90           95
Thr Lys Asp Asn Leu Met Arg Pro Pro Gly Met Thr Ser Ser Ser Gln
      100           105           110

```

<210> 5223

<211> 637

<212> DNA

<213> Homo sapiens

<400> 5223

```

ngcaccattt tcgacaatga agccaaagac gtggagagag aagtttgctt tattgatatt
60
gcctgcgatg aaattccaga ggcgtactac aaagaatctg aggatcctaa gcacttcaag
120
tcagagaaga caggacgggg acagttgagg gaaggctgga gagatagtca tcagcctatc
180
atgtgctcct acaagctggt gactgtgaag tttgaggtct gggggcttca gaccagagtg
240
gaacaatttg tacacaaggt ggtccgagac attctgctga ttggacatag acaggctttt
300
gcatggggtg atgagtggta tgatatgaca atggatgatg ttcgggaata cgagaaaaac
360
atgcatgaac aaaccaacat aaaagtttgc aatcagcatt cctcccctgt ggatgacata
420
gagagtcatg cccaacaag tacatgacaa tggatgaagt ccgagaattt gaacgagcca
480
ctcaggaagc caccaacaag aaaatcggca ttttcccacc tgcaatttct atctccagca
540
tccccctgct gccttcttcc gtccgcagtg cgccttctag tgctccatcc acccctctct
600
ccacagacgc acccgattt ctgtccgttc ccaaaga
637

```

<210> 5224

<211> 148

<212> PRT

<213> Homo sapiens

<400> 5224

```

Xaa Thr Ile Phe Asp Asn Glu Ala Lys Asp Val Glu Arg Glu Val Cys

```

1                    5                    10                    15  
 Phe Ile Asp Ile Ala Cys Asp Glu Ile Pro Glu Arg Tyr Tyr Lys Glu  
                   20                    25                    30  
 Ser Glu Asp Pro Lys His Phe Lys Ser Glu Lys Thr Gly Arg Gly Gln  
                   35                    40                    45  
 Leu Arg Glu Gly Trp Arg Asp Ser His Gln Pro Ile Met Cys Ser Tyr  
                   50                    55                    60  
 Lys Leu Val Thr Val Lys Phe Glu Val Trp Gly Leu Gln Thr Arg Val  
 65                    70                    75                    80  
 Glu Gln Phe Val His Lys Val Val Arg Asp Ile Leu Leu Ile Gly His  
                   85                    90                    95  
 Arg Gln Ala Phe Ala Trp Val Asp Glu Trp Tyr Asp Met Thr Met Asp  
                   100                    105                    110  
 Asp Val Arg Glu Tyr Glu Lys Asn Met His Glu Gln Thr Asn Ile Lys  
                   115                    120                    125  
 Val Cys Asn Gln His Ser Ser Pro Val Asp Asp Ile Glu Ser His Ala  
                   130                    135                    140  
 Gln Thr Ser Thr  
 145

<210> 5225  
 <211> 394  
 <212> DNA  
 <213> Homo sapiens

<400> 5225  
 acgcgtgaag gggctggggt gggcaatcag ggaggacttc ctggaggcgg cagctgaggc  
 60  
 tggggcagag aaggaccag ggcactggaa ggggaaggag aaacgtaagc agagtcttgg  
 120  
 caggcctggt cagacggaca tgcccaaggg aacagatagt accaggacag gggaccctgg  
 180  
 tctgaagggg .cgatagcctg gccccagtg gaaacagccc ctcccaaccc tggcggcaga  
 240  
 cagggagggt cggcaggtat gtgagatgca aacctggggg actgcccata cccagtgga  
 300  
 tgtgaggaca cgggtgggttc aggaagtgga gtgacaaatg ggctgtgctg gacttgcttt  
 360  
 ccccatga aggttaggaa ccaagagaac ggcc  
 394

<210> 5226  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 5226  
 Met Trp Gly Lys Gln Val Gln His Ser Pro Phe Val Thr Pro Leu Pro  
 1                    5                    10                    15  
 Glu Pro Thr Val Ser Ser His Pro Leu Gly Asp Gly Gln Ser Pro Arg  
                   20                    25                    30  
 Phe Ala Ser His Ile Pro Ala Asp Pro Pro Cys Leu Pro Pro Gly Leu  
                   35                    40                    45  
 Gly Gly Ala Val Ser Thr Gly Gly Gln Ala Ile Ala Pro Ser Asp Gln

50	55	60
Gly Pro Leu Ser Trp Tyr Tyr Leu Phe Pro Trp Ala Cys Pro Ser Asp		
65	70	75
Gln Ala Cys Gln Asp Ser Ala Tyr Val Ser Pro Ser Pro Ser Ser Ala		80
	85	90
Leu Gly Pro Ser Leu Pro Gln Pro Gln Leu Pro Pro Pro Gly Ser Pro		95
	100	105
		110
Pro		

<210> 5227  
 <211> 2366  
 <212> DNA  
 <213> Homo sapiens

<400> 5227  
 tcgcgaacag gccacccagg cacacgtgga tggtctttag ctccctggcg ccaccagatg  
 60  
 cagctgccag tgagatgttc tgcagctgtt tgatcctctc gctgaagtcg gacacccact  
 120  
 ggatgacggt catgccggca ggcaccgtgt agaaggccag tgtggtaacc ttacctgtct  
 180  
 acctgaactt caccctgca gacctcatct tcaccgtgga cttcgaaatt gctacaaagg  
 240  
 aggatcctcg cagcttctac gagcggggtg tcgcagtctt gtgcacagag taaacttttc  
 300  
 tagctgcccc tttctgtaat agtgaaagt ggtatttaac atttattcat ttttaaata  
 360  
 tttggaaggt ctgagcttgt gaaaagaaag tgggttggtct gaggttggag gaagctgaat  
 420  
 ggaatctgac ggttgggagt ggtggaaatt ggaaggatac caggaggtat ttgggaaaac  
 480  
 cttacggagc tgccctcgtc tactggagca gaagaaatag acctaat ttt cctcaaggga  
 540  
 attatggaga atcctattgt aaaatcactt gctaaggctc gtgagaggct agaagattcc  
 600  
 aaactagaag ctgtcagtga caataacttg gaattagtca atgaaattct tgaagacatc  
 660  
 actcctctaa taaatgtgga tgaaaatgtg gcagaattgg ttggtatact caaagaacct  
 720  
 cacttccagt cactgttgga ggcccatgat attgtggcat caaagtgtta tgattcacct  
 780  
 ccatcaagcc cagaaatgaa taattcttct atcaataatc agttattacc agtagatgcc  
 840  
 attcgtattc ttggtattca caaaagagct ggggaaccac tgggtgtgac atttaggggt  
 900  
 gaaaataatg atctggtaat tgcccgaatc ctccatgggg gaatgataga tcgacaaggt  
 960  
 ctacttcatg tgggagatat aattaaagaa gtcaatggcc atgagggttg aaataatcca  
 1020  
 aagggaattac aagaattact gaaaaatatt agtggagtg tcaccctaaa aatcttacca  
 1080  
 agttatagag ataccattac tcctcaacag gtatttgtga agtgtcattt tgattataat  
 1140

ccatacaatg acaacctaata accttgcaaaa gaagcaggat tgaagttttc caaaggagag  
 1200  
 attcttcaga ttgtaaatag agaagatcca aattggtggc aggctagcca tgtaaaagag  
 1260  
 ggaggaagcg ctggtctcat tccaagccag ttcttgggaag agaagagaaa ggcatttggt  
 1320  
 agaagagact gggacaattc aggacctttt tgtggaacta taagtagcaa aaaaaagaaa  
 1380  
 aagatgatgt atctcacaac cagaaatgca gaatttgatc gtcattgaaat ccagatatat  
 1440  
 gaggaggtag ccaaaatgcc tcccttccag agaaaaacat tagtattgat aggagctcaa  
 1500  
 ggtgtaggcc gaagaagctt gaaaaacagg ttcattagtat tgaatccac tagatttgga  
 1560  
 actacggtgc catttacttc acggaaacca aggggaagatg aaaaagatgg ccaggcatat  
 1620  
 aagtttggtg cactgctga gatggaagca gatattaaag ctggaaagta tttggaacat  
 1680  
 ggggaatatg aaggaaatct ctatggaacc aaaattgatt ctattcttga ggttgtccaa  
 1740  
 actggacgga cttgcattct ggatgtcaac ccacaagcac tgaaagtatt gaggacatca  
 1800  
 gagtttatgc cctatgtggt atttattgag gctccggagc tagagacgtt acgtgccatg  
 1860  
 cacaaggctg tgggtgatgc aggaatcact accaagcttc tgaccgactc tgacttgaag  
 1920  
 aaaacagtgg atgaaagtgc acggattcag agagcataca accactatct tgatttgatc  
 1980  
 atcataaatg ataacttaga caaagccttt gaaaaactgc aaactgccat agagaaactg  
 2040  
 agaatggaac cacagtgggt cccaatcagc tgggtttact gatgattcag taagggttaac  
 2100  
 aatgaaaatt aaactcttaa aaagtgactg caacaaataa accttctact gagaaaatac  
 2160  
 atcacagata gaagattatc tgctaagtcc aggcattttt atggtgtaga ttgaaataat  
 2220  
 agtacacttc tgaattttta tataaaatgt ggttgggaagg tgtactaata tataatttat  
 2280  
 ctttaattttt ctaactttgt atggataatc tttctattca tatcacataa agaaatgcgt  
 2340  
 tgaagcaaaa aaaaaaaaaa aaaaaa  
 2366

&lt;210&gt; 5228

&lt;211&gt; 550

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5228

Arg	Leu	Gly	Val	Val	Glu	Ile	Gly	Arg	Ile	Pro	Gly	Gly	Ile	Trp	Glu
1			5					10					15		
Asn	Leu	Thr	Glu	Leu	Pro	Ser	Ser	Thr	Gly	Ala	Glu	Glu	Ile	Asp	Leu
			20					25					30		
Ile	Phe	Leu	Lys	Gly	Ile	Met	Glu	Asn	Pro	Ile	Val	Lys	Ser	Leu	Ala

	35					40					45				
Lys	Ala	Arg	Glu	Arg	Leu	Glu	Asp	Ser	Lys	Leu	Glu	Ala	Val	Ser	Asp
	50					55					60				
Asn	Asn	Leu	Glu	Leu	Val	Asn	Glu	Ile	Leu	Glu	Asp	Ile	Thr	Pro	Leu
65					70					75					80
Ile	Asn	Val	Asp	Glu	Asn	Val	Ala	Glu	Leu	Val	Gly	Ile	Leu	Lys	Glu
				85					90					95	
Pro	His	Phe	Gln	Ser	Leu	Leu	Glu	Ala	His	Asp	Ile	Val	Ala	Ser	Lys
				100				105					110		
Cys	Tyr	Asp	Ser	Pro	Pro	Ser	Ser	Pro	Glu	Met	Asn	Asn	Ser	Ser	Ile
		115					120					125			
Asn	Asn	Gln	Leu	Leu	Pro	Val	Asp	Ala	Ile	Arg	Ile	Leu	Gly	Ile	His
	130					135					140				
Lys	Arg	Ala	Gly	Glu	Pro	Leu	Gly	Val	Thr	Phe	Arg	Val	Glu	Asn	Asn
145					150					155					160
Asp	Leu	Val	Ile	Ala	Arg	Ile	Leu	His	Gly	Gly	Met	Ile	Asp	Arg	Gln
				165					170					175	
Gly	Leu	Leu	His	Val	Gly	Asp	Ile	Ile	Lys	Glu	Val	Asn	Gly	His	Glu
			180				185						190		
Val	Gly	Asn	Asn	Pro	Lys	Glu	Leu	Gln	Glu	Leu	Leu	Lys	Asn	Ile	Ser
		195					200					205			
Gly	Ser	Val	Thr	Leu	Lys	Ile	Leu	Pro	Ser	Tyr	Arg	Asp	Thr	Ile	Thr
	210					215					220				
Pro	Gln	Gln	Val	Phe	Val	Lys	Cys	His	Phe	Asp	Tyr	Asn	Pro	Tyr	Asn
225					230					235					240
Asp	Asn	Leu	Ile	Pro	Cys	Lys	Glu	Ala	Gly	Leu	Lys	Phe	Ser	Lys	Gly
				245					250					255	
Glu	Ile	Leu	Gln	Ile	Val	Asn	Arg	Glu	Asp	Pro	Asn	Trp	Trp	Gln	Ala
			260					265					270		
Ser	His	Val	Lys	Glu	Gly	Gly	Ser	Ala	Gly	Leu	Ile	Pro	Ser	Gln	Phe
	275						280					285			
Leu	Glu	Glu	Lys	Arg	Lys	Ala	Phe	Val	Arg	Arg	Asp	Trp	Asp	Asn	Ser
	290					295					300				
Gly	Pro	Phe	Cys	Gly	Thr	Ile	Ser	Ser	Lys	Lys	Lys	Lys	Lys	Met	Met
305					310					315				320	
Tyr	Leu	Thr	Thr	Arg	Asn	Ala	Glu	Phe	Asp	Arg	His	Glu	Ile	Gln	Ile
				325					330					335	
Tyr	Glu	Glu	Val	Ala	Lys	Met	Pro	Pro	Phe	Gln	Arg	Lys	Thr	Leu	Val
			340					345					350		
Leu	Ile	Gly	Ala	Gln	Gly	Val	Gly	Arg	Arg	Ser	Leu	Lys	Asn	Arg	Phe
		355					360					365			
Ile	Val	Leu	Asn	Pro	Thr	Arg	Phe	Gly	Thr	Thr	Val	Pro	Phe	Thr	Ser
	370					375					380				
Arg	Lys	Pro	Arg	Glu	Asp	Glu	Lys	Asp	Gly	Gln	Ala	Tyr	Lys</		

465		470		475		480									
Val	Val	Asp	Ala	Gly	Ile	Thr	Thr	Lys	Leu	Leu	Thr	Asp	Ser	Asp	Leu
		485		490		495									
Lys	Lys	Thr	Val	Asp	Glu	Ser	Ala	Arg	Ile	Gln	Arg	Ala	Tyr	Asn	His
		500		505		510									
Tyr	Phe	Asp	Leu	Ile	Ile	Ile	Asn	Asp	Asn	Leu	Asp	Lys	Ala	Phe	Glu
		515		520		525									
Lys	Leu	Gln	Thr	Ala	Ile	Glu	Lys	Leu	Arg	Met	Glu	Pro	Gln	Trp	Val
		530		535		540									
Pro	Ile	Ser	Trp	Val	Tyr										
545		550													

&lt;210&gt; 5229

&lt;211&gt; 1031

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5229

```

acgcgtgtgc tgtggttaca tccgtggaac agacagacag cagctgcccc tgcaaatgtc
60
agcgccagcc cagtcaaaag agcttgaaac ctaccaagcc ggaggactgt gctgtgcctc
120
tctcgccac attttcccca agcactctca ggaacctggc aacagtgtcc ccttgtggcc
180
aagcctggaa catcacatct gtacgttgca atctgtggat cagctacgag actgagagaa
240
aggaatgaaa ggatggaaga attacaagat caggcactgc tgtctgtctg ttccacggat
300
gtaaccacag cacacgcgtg gctcacggta ctagtgtgat aaatgcttgt tacatgaagg
360
cgtgaacagg gatgagaaga gacttcctgg agaaacaaaa ggactaacia tcaggaaggg
420
gaggtgatcg gggcaggagt aaagtggaca cctcagcaaa gccattcgct gtgatctctg
480
attgtgcagt gtcattgtct gtcaccagag cccctcgtg tttgatgttg gccaatgccg
540
ccagcatgat ctagcaggcc aaatcctaata ctaccattct ctgacaccag ctgggtcccct
600
ggggtcgctc acccgatgtc cccattctc cccacttggc cccccaca ggctctcggc
660
aaaggaccgt gggaggcacc tgtgacactg cccttttctt gtgcagctgt ttttcttctt
720
cattcttttc actcctcggt actctttttt ttttactct cagccacac aaaactagga
780
actttgttat tctacttatt tttctgtact ctgtctgttt gcacacagat ggatatctga
840
gagccagcga actttcttta cctcctagta tcatttcatg aaaattagta gcacctgcac
900
aatggggcct tggagacagg aataaaaagga aaaatctgga atggaatcac atgacgcaac
960
aggctatgaa gactccctgc ccggctgcta tatgtctggt aaacagaata aatagtactt
1020
gagcatccct g
1031

```



<210> 5230  
 <211> 102  
 <212> PRT  
 <213> Homo sapiens

<400> 5230  
 Met Ile Leu Gly Gly Lys Glu Ser Ser Leu Ala Leu Arg Tyr Pro Ser  
 1 5 10 15  
 Val Cys Lys Gln Thr Glu Tyr Arg Lys Ile Ser Arg Ile Thr Lys Phe  
 20 25 30  
 Leu Val Leu Cys Gly Leu Arg Val Lys Lys Lys Arg Val Thr Arg Ser  
 35 40 45  
 Glu Lys Asn Glu Glu Glu Lys Gln Leu His Arg Lys Arg Ala Val Ser  
 50 55 60  
 Gln Val Pro Pro Thr Val Leu Cys Arg Glu Pro Val Gly Glu Ala Lys  
 65 70 75 80  
 Trp Gly Glu Trp Gly Thr Ser Gly Gly Arg Pro Gln Gly Thr Ser Trp  
 85 90 95  
 Cys Gln Arg Met Val Asp  
 100

<210> 5231  
 <211> 845  
 <212> DNA  
 <213> Homo sapiens

<400> 5231  
 tccggatcctt ggaggggtaca gagggcgccc ctcggcctcc tccctttcgg aggtggggac  
 60  
 aaggtggagg aagggctgca ggaggaggag ctctagcatc gcgacccgcc ccgtcccgtc  
 120  
 cagtctggcc tgggcgccgc gggaaacgctg tcctggctgc cgccacccga acagcctgtc  
 180  
 ctggtgcccc ggctccctgc cccgcgccc gtcattgaccc tgcgcccctc actcctcccg  
 240  
 ctccatctgc tgetgctgct gctgctcagt gcggcggtgt gccgggctga ggctgggctc  
 300  
 gaaaccgaaa gtcccgtccg gaccctccaa gtggagaccc tgggtggagcc cccagaacca  
 360  
 tgtgccgagc ccgtgctttt tggagacacg cttcacatac actacacggg aagcttggtg  
 420  
 gatggacgta ttattgacac ctccctgacc agagaccctc tggttataga acttggccaa  
 480  
 aagcaggtga ttccaggtct ggagcagagt cttctcgaca tgtgtgtggg agagaagcga  
 540  
 agggcaatca ttccttctca cttggcctat ggaaaacggg gatttccacc atctgtccca  
 600  
 gcggatgcag tgggtgcagta tgacgtggag ctgattgcac taatccgagc caactactgg  
 660  
 ctaaagctgg tgaagggcat tttgcctctg gtagggatgg ccatgggtgcc agccctctctg  
 720  
 ggccctcattg ggtatcacct atacagaaag gccaatagac ccaaagtctc caaaaagaag  
 780

ctcaaggaag agaaacgaaa caagagcaaa aagaaataat aaataataaa ttttaaaaaa  
840

cttaa

845

<210> 5232

<211> 201

<212> PRT

<213> Homo sapiens

<400> 5232

Met	Thr	Leu	Arg	Pro	Ser	Leu	Leu	Pro	Leu	His	Leu	Leu	Leu	Leu	Leu
1				5				10					15		
Leu	Leu	Ser	Ala	Ala	Val	Cys	Arg	Ala	Glu	Ala	Gly	Leu	Glu	Thr	Glu
			20					25					30		
Ser	Pro	Val	Arg	Thr	Leu	Gln	Val	Glu	Thr	Leu	Val	Glu	Pro	Pro	Glu
			35				40					45			
Pro	Cys	Ala	Glu	Pro	Ala	Ala	Phe	Gly	Asp	Thr	Leu	His	Ile	His	Tyr
	50					55				60					
Thr	Gly	Ser	Leu	Val	Asp	Gly	Arg	Ile	Ile	Asp	Thr	Ser	Leu	Thr	Arg
65					70					75					80
Asp	Pro	Leu	Val	Ile	Glu	Leu	Gly	Gln	Lys	Gln	Val	Ile	Pro	Gly	Leu
			85					90						95	
Glu	Gln	Ser	Leu	Leu	Asp	Met	Cys	Val	Gly	Glu	Lys	Arg	Arg	Ala	Ile
			100					105						110	
Ile	Pro	Ser	His	Leu	Ala	Tyr	Gly	Lys	Arg	Gly	Phe	Pro	Pro	Ser	Val
		115					120					125			
Pro	Ala	Asp	Ala	Val	Val	Gln	Tyr	Asp	Val	Glu	Leu	Ile	Ala	Leu	Ile
	130					135					140				
Arg	Ala	Asn	Tyr	Trp	Leu	Lys	Leu	Val	Lys	Gly	Ile	Leu	Pro	Leu	Val
145					150					155					160
Gly	Met	Ala	Met	Val	Pro	Ala	Leu	Leu	Gly	Leu	Ile	Gly	Tyr	His	Leu
			165						170					175	
Tyr	Arg	Lys	Ala	Asn	Arg	Pro	Lys	Val	Ser	Lys	Lys	Lys	Leu	Lys	Glu
			180					185					190		
Glu	Lys	Arg	Asn	Lys	Ser	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys	Lys
			195					200							

<210> 5233

<211> 2801

<212> DNA

<213> Homo sapiens

<400> 5233

agatctcaat tcacacatga ctacctttga gctaatagact gtctccagaa aataactgtg  
60  
ccccaagaag tgctccagat ttgcaaggaa tagccccaag agaataccaa gacaagcagg  
120  
ctgttccttg gaaaaaatct aatgcaagga gggctagtgc acagcaaatt cactgcctcc  
180  
tcccatgcac gtggtagaga gtaccagtat caacatggcc ctgttttctg ctaaaaccag  
240  
attttgagga atcagagacc cccaacacta ctcaactcagt agctagcagc ccttctcttt  
300

caactgggag tggtattaga atgaaaagta attagttaga agggcataca tctcagtggc  
360  
atgagcattg tggaatatcc tttcctaggc acatttgtcc actaaggga cagcctcaga  
420  
aactgggtaca gcaatgggtg agatgagatc ctggagagag aacacagcca tccccatatag  
480  
aaaggcacag cttttgggct tctctggcct gaatgccttc tgggggtattt ccatatgcaa  
540  
cagcccagag tcatagcctt gggcaaccac acatagaggt ttccttctca cttcagacac  
600  
atacatcact ttcacaccac ttggggatgg aaatacctac aagagtgaag gtcaagggcc  
660  
ctccccagge atctcattca ttactcagct tccttcctga ccaagtctgc caaccaatgg  
720  
ccagctatgc gcctcatcct cattgcttct gcctccacgt aaatgaaacc aaaggcctca  
780  
gcatatcctg ggaggactgg gggctgttac ctaatgggcc tctctgtccc attataggtg  
840  
caaggcacc caccacaca tttgcaccac tactccaaga tagtattttt cttttcacac  
900  
aatctcttta cagcagaatc cagagttggg ttgtagttta ccttcctgga aagctcatta  
960  
tctttgtttg aattaacatt tcagcatgga actaactggg cggaggaagg atcgttatac  
1020  
gtcttcagaa agttctcatt gcccagctg cctagtacta tacaagaagc tctactttga  
1080  
tggcagatct aagaaggcta taggcctttg tttgtaggaa gcagtgtcat tacattcaag  
1140  
cttcacttct ctgattggct tccaaccact gggattcaaa gagaatccaa ggttctgcct  
1200  
atgtctgatg acataaggaa aacttggtt cctctgctca aggttcccct ctgctcatcc  
1260  
ctcctcatte agacatcctc caccatacca gtgttttagaa gcaaaacatg aagggttagc  
1320  
gccaccagga tagttagcag aaatattgtc tgtaaagcta ggcagatgag cccagaagaa  
1380  
tgggtcccaga gaaagcagac tggctccaat agatatcagg cagcaatccc aataaattct  
1440  
gacatgtcct tggcaatgga agcctgggtt ggagatcctg aggcagctgt gcctactgtt  
1500  
ccccacctca gaagcttctt gccagagag ccagcagcct tgggatacta atgaggatgc  
1560  
aactggctta ttggtatgaa atagaagggt gctttgtagg ggcaagcagg caaagagtac  
1620  
tatccacatg gcaggcaggt ggctttgtgt ctggaaagct ttgcctagcc agtacagctg  
1680  
tgagcagagg ctggttataa atttgaactc cctcagccca tttgcaactc tgcctctgtt  
1740  
cccttgcatc ctggttggtt gccctttagt ttcctagtaa atgtccttt tgaaaaactc  
1800  
caaccttgct ttatttaact tgggggaagg ggattctcca atgtcttttc caggataaag  
1860  
aaggaaatta aaataccatg aaaaaatgga catggcagta gaaaggaaac attctgatca  
1920

gaccttggga aaagctggtg ccgagagagg gagaggccag gtgtccccc acccaactgg  
1980  
cactgattct cagccccttc ctcttacttc tgttggttc aaggagacct gcccttgatg  
2040  
tgtgttgctg ctgaagcacc ctcccagcca gtgagttgga catatgcagc aggcactttg  
2100  
atgtccagga agtacactgg tacatgacag gagcaagggc caggagggg aggggaaagg  
2160  
tttctacaat gcagatgttt tcaaaattct ccaacaatca tgactctaaa tggatgatt  
2220  
tagggctggg tgcagtgact cacacctgta atctcagcac tttgggaggc caaggcggga  
2280  
ggatcacttg ataccagaag ttcaagacca gtctggcaac gtggagagac caccatcatt  
2340  
tcaaaagaga ccccccgcc cccccggcta atttttaaaa aattagcagt acctgtagtc  
2400  
ccagctactt aggaagctga gataggagaa tcgctgagt ccaagagctt gaggctacag  
2460  
cgagccaaga ttgcaacact gcatttcagc ctgggtgaca gagcaaggcc ctgtctctct  
2520  
aaaaaagaaa aaaaaggat tgttttagttc acatggccat cagtagaact acatttcata  
2580  
tgatgagaag aaaataatta tttattttac acttgagtca gggagactga caaaggatag  
2640  
gtatggaaaa tggcttgcta ttttcatggc caccctgtcc tgcaatgcgg ggggtgggag  
2700  
gggggacatt ccaatgactt actgctgcat gacaaagcac caaacatag tggcttaa  
2760  
agaaatatat tgtctctcat gaaaaaaaaa aaaaaaaaaa a  
2801

<210> 5234  
<211> 57  
<212> PRT  
<213> Homo sapiens

<400> 5234  
Leu Thr Pro Val Ile Ser Ala Leu Trp Glu Ala Lys Ala Gly Gly Ser  
1 5 10 15  
Leu Asp Thr Arg Ser Ser Arg Pro Val Trp Gln Arg Gly Glu Thr Thr  
20 25 30  
Ile Ile Ser Lys Glu Thr Pro Pro Pro Pro Arg Leu Ile Phe Lys Lys  
35 40 45  
Leu Ala Val Pro Val Val Pro Ala Thr  
50 55

<210> 5235  
<211> 3017  
<212> DNA  
<213> Homo sapiens

<400> 5235  
nncggccggg aaagtaacca gaagcttcag gaagagatta taaagacttt ggaacacttg  
60

cccattccta ctaaaaatat gttggaggaa agcaaagtac ttccaattat tcaacgctgg  
120  
tctcagacta agactgctgt ccctccgttg agtgaaggag atgggtattc tagtgagaat  
180  
acatcgctg ctcatacacc actcaacaca cctgatcctt ccaccaagct gagcacagaa  
240  
gctgacacag aactcccaa gaaactaatg tttcgcagac tgaaaattat aagtgaaaat  
300  
agcatggaca gtgcaatctc tgatgcaacc agtgagctag aaggcaagga tggcaaagag  
360  
gatcttgatc aattagaaaa tgtccctgta gaggaagagg aagaattgca gtcacaacag  
420  
ctactccac aacagctgcc tgaatgcaaa gttgatagt aaaccaacat agaagctagt  
480  
aagctaccta catctgaacc agaagctgac gctgaaatag agcccaaaga gagcaacggc  
540  
acaaaactag aagaacctat taatgaagaa acaccatccc aagatgaaga ggagggtgtg  
600  
tctgatgtgg agagtgaag gagccaagaa cagccagata aaacagtgga tataagtgat  
660  
ttggccacca aactcctgga cagttgaaa gacctaaagg aggtatatcg aattccaaag  
720  
aaaagtcaaa ctgaaaagga aaacacaaca actgaacgag gaagggatgc tgttggttc  
780  
agagatcaaa cacctgcccc gaagactcct aataggtcaa gagagagaga cccagacaag  
840  
caaactcaaa ataaagagaa aaggaaacga agaagctccc tctcaccacc ctcttctgcc  
900  
tatgagcggg gaacaaaaag gccagatgac agatatgata caccaacttc taaaaagaaa  
960  
gtacgaatta aagaccgcaa taaactttct acagaggaac gccggaagtt gtttgagcaa  
1020  
gagggtggctc aacgggaggc tcagaaacaa cagcaacaga tgcagaacct gggaatgaca  
1080  
tcaccactgc cctatgactc tcttggttat aatgccccgc atcatccctt tgctggttac  
1140  
ccaccagggt atcccatgca ggcctatgtg gatccagca accctaattg tggaaagggtg  
1200  
ctcctgcca caccagcat ggaccagtg tgttctctg ctccttatga tcatgctcag  
1260  
cccttggtgg gacattctac agaaccctt tctgcccctc caccagtacc agtggtgcca  
1320  
catgtggcag ctctgtgga agtttccagt tcccagtatg tggcccagag tgatggtgta  
1380  
gtacaccaag actccagcgt tgctgtcttg ccagtgccg cccccggccc agttcaggga  
1440  
cagaattata gtgtttggga ttcaaacc aaagtctgtc gtgtacagca gcagtactct  
1500  
cctgcacagt ctcaagcaac catatattat caaggacaga catgtccaac agtctatggt  
1560  
gtgacatcac cttattcaca gacaactcca ccaattgtac agagttatgc ccagccaagt  
1620  
cttcagtata tccaggggca acagattttc acagctcatc cacaaggagt ggtggtacag  
1680

ccagccgcag cagtgactac aatagttgca ccagggcagc ctcagccctt gcagccatct  
1740  
gaaatgggtg tgacaaataa tctcttgat ctgccgcccc cctctcctcc caaaccaaaa  
1800  
accattgtct tacctcccaa ctggaagaca gctcgagatc cagaaggga gatttattac  
1860  
taccatgtga tcacaaggca gactcagtgg gatcctccta cttgggaaag cccaggagat  
1920  
gatgccagcc ttgagcatga agctgagatg gacctgggaa ctccaacata tgatgaaaac  
1980  
cccataagg cctcgaaaaa gcccaagaca gcagaagcag acacctccag tgaactagca  
2040  
aagaaaagca aagaagtatt cagaaaagag atgtcccagt tcacgtcca gtgcctgaac  
2100  
ccttaccgga aacctgactg caaagtggga agaattacca caactgaaga ctttaaacat  
2160  
ctggctcgca agctgactca cgggtgtatg aataaggagc tgaagtactg taagaatcct  
2220  
gaggacctgg agtgcaatga gaatgtgaaa cacaaaacca aggagtacat taagaagtac  
2280  
atgcagaagt ttggggctgt ttacaaaccc aaagaggaca ctgaattaga atgactgttg  
2340  
ggccaggggtg ggaggatggg tggtcaggta ggacagactc tagggagagg aaatcctgtg  
2400  
ggcctttctg tcccaccctt gtcagcactg tgctactgat gatacatcac cctggggaat  
2460  
tcaaccctgc agatgtcaac tgaaggccac aaaaatgaac tccatctaca agtgattacc  
2520  
tagttgtgag ctggtggcat gtgggttagaa gccatcagag gtgcaagggc ttagaaaaga  
2580  
acctggccag acctgactcc actcttaaac ctgggtcttc tccttggcgg tgctgtcagc  
2640  
gcacagaccc atgcgcatcc ccaccacaa ccctttaccc tgatgatctg tattatatat  
2700  
taatgtatat gtgaatatat tgaaaataat ttgttttttc ctgggttttg tttgggtttc  
2760  
gttttgcttt tagcctctac atgctaggat cacaggaaga ctttgtaagg acagtttaag  
2820  
ttctcctgca aggtttaatt tgttatcatg taaatattcc aaagcaggct gccttggtg  
2880  
tttggccagc cttgtgctat gttgataaga ttgatttact gcttaaaatc actttacttt  
2940  
atccaatttt tactgaactt tttatgtaaa aaaataaaat caattaaaga aaaaaaaaaac  
3000  
aaaaaaaaaa aaaaaaa  
3017

&lt;210&gt; 5236

&lt;211&gt; 178

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5236

Lys Thr Ile Val Leu Pro Pro Asn Trp Lys Thr Ala Arg Asp Pro Glu

1		5		10		15									
Gly	Lys	Ile	Tyr	Tyr	Tyr	His	Val	Ile	Thr	Arg	Gln	Thr	Gln	Trp	Asp
		20		25		30									
Pro	Pro	Thr	Trp	Glu	Ser	Pro	Gly	Asp	Asp	Ala	Ser	Leu	Glu	His	Glu
		35		40		45									
Ala	Glu	Met	Asp	Leu	Gly	Thr	Pro	Thr	Tyr	Asp	Glu	Asn	Pro	Met	Lys
	50			55		60									
Ala	Ser	Lys	Lys	Pro	Lys	Thr	Ala	Glu	Ala	Asp	Thr	Ser	Ser	Glu	Leu
65				70		75								80	
Ala	Lys	Lys	Ser	Lys	Glu	Val	Phe	Arg	Lys	Glu	Met	Ser	Gln	Phe	Ile
			85			90								95	
Val	Gln	Cys	Leu	Asn	Pro	Tyr	Arg	Lys	Pro	Asp	Cys	Lys	Val	Gly	Arg
		100		105		110									
Ile	Thr	Thr	Thr	Glu	Asp	Phe	Lys	His	Leu	Ala	Arg	Lys	Leu	Thr	His
		115		120		125									
Gly	Val	Met	Asn	Lys	Glu	Leu	Lys	Tyr	Cys	Lys	Asn	Pro	Glu	Asp	Leu
	130			135		140									
Glu	Cys	Asn	Glu	Asn	Val	Lys	His	Lys	Thr	Lys	Glu	Tyr	Ile	Lys	Lys
145				150		155								160	
Tyr	Met	Gln	Lys	Phe	Gly	Ala	Val	Tyr	Lys	Pro	Lys	Glu	Asp	Thr	Glu
			165			170								175	
Leu	Glu														

<210> 5237  
 <211> 1238  
 <212> DNA  
 <213> Homo sapiens

<400> 5237  
 ntagaagaca aggcgtcggt tgaataactt gcctgatttt tcttcctacc gagtagcatt  
 60  
 tctttttttt tcaccatata tttccctaag gcagctcctt attctgtagg aattgccaat  
 120  
 gttgatgtgt tattgttagg tatttatata attcacaggg ctgtcagaaa tcccgatgat  
 180  
 cttgaagcaa ggtctcatat gcacttggca agtgcttttg ctggcatcgg ctttggaat  
 240  
 gctggtgttc atctgtgcca tggaatgtct tacccaattt caggtttagt gaagatgtat  
 300  
 aaagcaaagg attacaatgt ggatcaccca ctggtgcccc atggcctttc tgtggtgctc  
 360  
 acgtccccag cggtgttcac tttcacggcc cagatgtttc cagagcgaca cctggagatg  
 420  
 gcagaaatac tgggagccga caccgcact gccaggatcc aagatgcagg gctggtgttg  
 480  
 gcagacacgc tccggaaatt cttattcgat ctggatgttg atgatggcct agcagctgtt  
 540  
 ggttactcca aagctgatat ccccgacta gtgaaaggaa cgctgccccca ggaaagggtc  
 600  
 accaagcttg caccctgtcc ccagtcagaa gaggatctgg ctgctctgtt tgaagcttca  
 660  
 atgaaactgt attaattgtc attttaactg aaagaattac cgctggccat ttagtgctg  
 720

agagcaagag ctgatctagc tagggctttg tcttttcatc tttgtgcata acttacctgt  
 780  
 taccagtata ggtgggatat acatttatct tgcaggaaat tccccaagc tcagagtcca  
 840  
 gttccttcca taaaacaggc tggacaaatg accactatgt tagaccccca ggctcgactt  
 900  
 caggggtcag tgttcctgtc ccaaacccca cacagaatac tctgcctctg cttcatgtag  
 960  
 caaatgagca aaaactcagt atctatcaaa agtgtaaatt atatttcta tgcctagtaa  
 1020  
 ttcacttcat gtctaaaaat ttatctgata gaaacactag caccagtaca tacagaagca  
 1080  
 tggcaaggat gtttctggca gcacttttct aataataaaa gatttgaaac aaccttaagt  
 1140  
 attcattatt ggtatataga tcacttatag tatactagac agtgggaatac tatggtactg  
 1200  
 ttaataaaga tgaagtaaatt ctcttgga aa aaaaaaa  
 1238

&lt;210&gt; 5238

&lt;211&gt; 212

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5238

Phe	Phe	Phe	Leu	Pro	Ser	Ser	Ile	Ser	Phe	Phe	Phe	Thr	Ile	Ser	Phe
1				5				10						15	
Pro	Lys	Ala	Ala	Pro	Tyr	Ser	Val	Gly	Ile	Ala	Asn	Val	Asp	Val	Leu
			20					25					30		
Leu	Leu	Gly	Ile	Tyr	Ile	Ile	His	Arg	Ala	Val	Arg	Asn	Pro	Asp	Asp
		35					40					45			
Leu	Glu	Ala	Arg	Ser	His	Met	His	Leu	Ala	Ser	Ala	Phe	Ala	Gly	Ile
	50					55					60				
Gly	Phe	Gly	Asn	Ala	Gly	Val	His	Leu	Cys	His	Gly	Met	Ser	Tyr	Pro
65				70						75				80	
Ile	Ser	Gly	Leu	Val	Lys	Met	Tyr	Lys	Ala	Lys	Asp	Tyr	Asn	Val	Asp
			85						90					95	
His	Pro	Leu	Val	Pro	His	Gly	Leu	Ser	Val	Val	Leu	Thr	Ser	Pro	Ala
			100					105					110		
Val	Phe	Thr	Phe	Thr	Ala	Gln	Met	Phe	Pro	Glu	Arg	His	Leu	Glu	Met
		115				120						125			
Ala	Glu	Ile	Leu	Gly	Ala	Asp	Thr	Arg	Thr	Ala	Arg	Ile	Gln	Asp	Ala
		130				135						140			
Gly	Leu	Val	Leu	Ala	Asp	Thr	Leu	Arg	Lys	Phe	Leu	Phe	Asp	Leu	Asp
145				150						155				160	
Val	Asp	Asp	Gly	Leu	Ala	Ala	Val	Gly	Tyr	Ser	Lys	Ala	Asp	Ile	Pro
			165						170					175	
Ala	Leu	Val	Lys	Gly	Thr	Leu	Pro	Gln	Glu	Arg	Val	Thr	Lys	Leu	Ala
		180						185					190		
Pro	Arg	Pro	Gln	Ser	Glu	Glu	Asp	Leu	Ala	Ala	Leu	Phe	Glu	Ala	Ser
		195					200						205		
Met	Lys	Leu	Tyr												
		210													



<210> 5239  
<211> 2061  
<212> DNA  
<213> Homo sapiens

<400> 5239  
nttttttttt tttttttttt tttttttttt tttttttttt tttttttttt tttttttttg  
60  
agccactct gctttattta caacacgcag gctgtctgta caaacagcgg ccgatattat  
120  
taaaaacaaa agaggtagt gagaatcgtc acctttctgc tttccttcct cacttgacca  
180  
ggctctagta ctccacctt gagctgccat gcccaatagg ggaagtccaa aattaaaaat  
240  
acaaccggtg tagaagaaaa taaatgggga gtgaaataga agaaaagatg agggagggga  
300  
gtgctaatat ttacactaga gttttataga caactgtccc attccatccc aattccaatc  
360  
ctgaccaga aagtgatggt ggcaggcca agagacagag attatgtgtc gggacacaga  
420  
cagcctcca tcccaaccg taatggattc aatttcaagt ccacagagtg gggaggaagg  
480  
atagggtggg aaagtgagac actcattttc aaacaagtct ccttgagaa ttctgcctt  
540  
gaagtgcaga cagtatccaa gctccagggg ataggctgag gaccctgagg ctcatctcc  
600  
aatcatgtt gtcatttga agttccaggc taaagttggt gccatcaggg ctctccagat  
660  
ttgggaggcc cccctaaccg ccgggcctct ggcctcagtt ccttgcatct ctggcaataa  
720  
aagaagtcgg ggacgttggc cttcttaatc ttagcacagg agaggtggat ccacgtccca  
780  
cacaggctgc actcaatcat gggccgccct gcaaagggct ttcgacagta acatgtgatc  
840  
agatcccatg agtcatcacc tgattctacc atgatgtcct cgtccatgac ccgcatctcg  
900  
ccttcaactg agctggcatc tccatcttgg cttgtttcag tgctgcccac ctcttgctt  
960  
tcaactgtcag caggagggac tccttcaggg tgcaactgtg cagggggcct aggagcctca  
1020  
gggggtgttg gcagcacagg gactggggct tcaccccta ccaactgtgc catctcttct  
1080  
tcttcttctt ctctctctc ttcctctctt tcttcagagt ctgtatcact ggggggtgcc  
1140  
tggggaggcc caggaggtgg gactctatcc cccggttctg ccttttttaa ctccgcttc  
1200  
ttgtcttctt tgattcgaga tctcttttcc ccatccccag gagttggccg aggcctccga  
1260  
agcaccacaa agccagcccc agctcctggc cccaacttct ggttcttctg gtccttcttt  
1320  
cgaggaggat gggagaggtc cccctgggaa aggggcacgg gggtaagagc agcagggggc  
1380  
cgggagggtat gtgtcaggga tgtgggggac aaaggagatg ccactttggg cccatccaga  
1440

tcaaagagag agtccttgag cttcatcttc tcaagcaagg tagcactgtc gggggcctgc  
 1500  
 agacgagaga aagtggacct tgggggtcct ggctgggtgg gacctgcttg agctgccctt  
 1560  
 ctcttgatg actttgcttt cttaacaaaa gtctggatgg ttcgaagatc tgagggggcc  
 1620  
 gagtcccagc catcactgtc ggccgcactc tctcctcgca atggagagct ggagccagag  
 1680  
 gctggccagt cactttcctc tttgctaggg ggaatgtaac cagcatatgc caaaacaaaa  
 1740  
 ctgcagaatt tgttgaaatc ctcaattgtt ctccgccgtt tctctggtgg ctgagtctct  
 1800  
 ggcttaaggg tcggaggtgg atcttcggga ctgggctccg ccatggcttc cagcatcgcc  
 1860  
 ccctcccctc ctcccggtcc ggccgcccc tccccggagc cggggatccc ggtgccgct  
 1920  
 ctagtgctcg atgctccac tgcttcgctc cacagaagtg tccgcctcag cccggttgag  
 1980  
 actcgagtcc gctagccgct gccgccacct ccctctacca ctgcctccc cactcccgga  
 2040  
 ccgggcccc tcccccgcg g  
 2061

<210> 5240

<211> 226

<212> PRT

<213> Homo sapiens

<400> 5240

Met	Met	Ser	Ser	Ser	Met	Thr	Arg	Ile	Ser	Pro	Ser	Leu	Glu	Leu	Ala
1				5					10					15	
Ser	Pro	Ser	Trp	Leu	Val	Ser	Val	Leu	Pro	Thr	Ser	Leu	Leu	Ser	Leu
			20					25					30		
Ser	Ala	Gly	Gly	Thr	Pro	Ser	Gly	Cys	Thr	Val	Ala	Gly	Gly	Leu	Gly
		35					40					45			
Ala	Ser	Gly	Gly	Val	Gly	Ser	Thr	Gly	Thr	Gly	Ala	Ser	Pro	Pro	Thr
	50					55				60					
Thr	Val	Ala	Ile	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser	Ser
65				70					75					80	
Ser	Ser	Glu	Ser	Val	Ser	Leu	Gly	Gly	Ala	Trp	Gly	Gly	Pro	Gly	Gly
			85					90					95		
Gly	Ser	Leu	Ser	Pro	Arg	Ser	Ala	Phe	Phe	Asn	Phe	Arg	Phe	Leu	Leu
			100				105					110			
Phe	Leu	Ile	Arg	Asp	Leu	Phe	Ser	Pro	Ser	Pro	Gly	Val	Gly	Arg	Gly
		115					120				125				
Leu	Arg	Ser	Thr	Pro	Lys	Pro	Ala	Pro	Ala	Pro	Gly	Pro	Asn	Phe	Arg
	130					135				140					
Phe	Phe	Arg	Ser	Phe	Phe	Arg	Gly	Gly	Trp	Glu	Arg	Ser	Pro	Trp	Glu
145				150					155					160	
Arg	Gly	Thr	Gly	Val	Arg	Ala	Ala	Gly	Gly	Arg	Glu	Val	Cys	Val	Arg
			165					170					175		
Asp	Val	Gly	Asp	Lys	Gly	Asp	Ala	Thr	Leu	Gly	Pro	Ser	Arg	Ser	Lys
		180					185				190				
Arg	Glu	Ser	Leu	Ser	Phe	Ile	Phe	Ser	Ser	Lys	Val	Ala	Leu	Ser	Gly

195                      200                      205  
 Ala Cys Arg Arg Glu Lys Val Asp Leu Gly Gly Pro Gly Trp Val Gly  
 210                      215                      220  
 Pro Ala  
 225

<210> 5241  
 <211> 461  
 <212> DNA  
 <213> Homo sapiens

<400> 5241  
 gcggccccg atttgcagcc catggatgca tttatcacgt ttgttctctt gcgtgcctcc  
 60  
 ccctcaatat gccgggggtg taccatttc caagggatga cagcagggcc ccacagcgag  
 120  
 cccaggtg atccggagcc ctcttcatcc ccgtccaggg ccgtttgcac tgctcccgcc  
 180  
 atcggcacac cttgttctgg ttgtgctggg acggcagcgc cccgtgaggt cagaggggtg  
 240  
 ctgtcacatc tgccaccag tgtggtctcc tggagatttc agtggttcgg tgcttcgctt  
 300  
 ctcacctggc cagctctgag ttcagcctct cgctgtggg gaccttgca tcctggcgcc  
 360  
 agaaggagga ggaagaagcc accagaggtt gccaggaacc cagtggcagg ggaggtgggg  
 420  
 ctgagccagg cccgcccgt gtgccgggag tccccacgcg g  
 461

<210> 5242  
 <211> 146  
 <212> PRT  
 <213> Homo sapiens

<400> 5242  
 Met Asp Ala Phe Ile Thr Phe Val Pro Leu Arg Ala Ser Pro Ser Ile  
 1                      5                      10                      15  
 Cys Arg Gly Cys Thr His Phe Gln Gly Met Thr Ala Gly Pro His Ser  
 20                      25                      30  
 Glu Pro Gln Ala Asp Pro Glu Pro Ser Ser Ser Pro Ser Arg Ala Val  
 35                      40                      45  
 Cys Thr Ala Pro Gly Ile Gly Thr Pro Cys Ser Gly Cys Ala Gly Thr  
 50                      55                      60  
 Ala Ala Pro Arg Glu Val Arg Gly Leu Leu Ser His Leu Pro Pro Ser  
 65                      70                      75                      80  
 Val Val Ser Trp Arg Phe Gln Trp Phe Gly Ala Ser Leu Leu Thr Trp  
 85                      90                      95  
 Pro Ala Leu Ser Ser Ala Ser Arg Leu Trp Gly Pro Leu His Pro Gly  
 100                      105                      110  
 Gly Arg Arg Arg Arg Lys Lys Pro Pro Glu Val Ala Arg Asn Pro Val  
 115                      120                      125  
 Ala Gly Glu Val Gly Leu Ser Gln Ala Arg Pro Leu Cys Arg Glu Phe  
 130                      135                      140  
 Pro Arg

145

<210> 5243  
<211> 344  
<212> DNA  
<213> Homo sapiens

<400> 5243  
ngaattcctt gcattctctt ctgggccaaa agaataatga ttaaatttaa gaatcaaacc  
60  
tggtctggacc ttacagacga gccatttggt cagaaggtaa ctgtggaccc tgacaactca  
120  
aattgcagtg aagaaagtgc taggttgtct ttgaagcttg gtgatgctgg aaaccccaga  
180  
agtcttgcta taagattcat ccttaccaat tacaacaagt tgtccatcca gagttgggtt  
240  
agtttgcgcc gagtcgagat catttccaac aattcaatcc aagcagtctt taacccaact  
300  
ggcgtatatg ctccctctgg ttactcctac cgctgccaac gcgt  
344

<210> 5244  
<211> 114  
<212> PRT  
<213> Homo sapiens

<400> 5244  
Xaa Ile Pro Cys Ile Leu Phe Trp Ala Lys Arg Ile Met Ile Lys Phe  
1 5 10 15  
Lys Asn Gln Thr Trp Leu Asp Leu Thr Asp Glu Pro Phe Gly Gln Lys  
20 25 30  
Val Thr Val Asp Pro Asp Asn Ser Asn Cys Ser Glu Glu Ser Ala Arg  
35 40 45  
Leu Ser Leu Lys Leu Gly Asp Ala Gly Asn Pro Arg Ser Leu Ala Ile  
50 55 60  
Arg Phe Ile Leu Thr Asn Tyr Asn Lys Leu Ser Ile Gln Ser Trp Phe  
65 70 75 80  
Ser Leu Arg Arg Val Glu Ile Ile Ser Asn Asn Ser Ile Gln Ala Val  
85 90 95  
Phe Asn Pro Thr Gly Val Tyr Ala Pro Ser Gly Tyr Ser Tyr Arg Cys  
100 105 110  
Gln Arg

<210> 5245  
<211> 483  
<212> DNA  
<213> Homo sapiens

<400> 5245  
nngccatgga aacgaaagcg gccaaagtaga gctccgtcct gacgcgccgc ctcccgtggg  
60  
ctccggccgg ctaagccgcy gcggacaact atgctgaaag ccaagatcct cttcgtgggg  
120

ccttgcgaga gtggaaaaac tgttttggcc aactttctga cagaatcttc tgacatcact  
180  
gaatacagcc caaccaagg agtgagggtt gagtcctgct ggccggccct gatgaaggat  
240  
gctcatggag tggatgatgt cttcaatgct gacatcccaa gccaccggaa ggaaatggag  
300  
atgtgggtatt cctgctttgt ccaacagccg tccttacagg acacacagtg tatgctaatt  
360  
gcacaccaca aaccaggctc tggagatgat aaaggaagcc tgtctttgtc gccacccttg  
420  
aacaagctga agctggtgca ctcaaacctg gaagatgacc ctgaggagat ccggatggaa  
480  
ttc  
483

<210> 5246  
<211> 131  
<212> PRT  
<213> Homo sapiens

<400> 5246  
Met Leu Lys Ala Lys Ile Leu Phe Val Gly Pro Cys Glu Ser Gly Lys  
1 5 10 15  
Thr Val Leu Ala Asn Phe Leu Thr Glu Ser Ser Asp Ile Thr Glu Tyr  
20 25 30  
Ser Pro Thr Gln Gly Val Arg Phe Glu Ser Cys Trp Pro Ala Leu Met  
35 40 45  
Lys Asp Ala His Gly Val Val Ile Val Phe Asn Ala Asp Ile Pro Ser  
50 55 60  
His Arg Lys Glu Met Glu Met Trp Tyr Ser Cys Phe Val Gln Gln Pro  
65 70 75 80  
Ser Leu Gln Asp Thr Gln Cys Met Leu Ile Ala His His Lys Pro Gly  
85 90 95  
Ser Gly Asp Asp Lys Gly Ser Leu Ser Leu Ser Pro Pro Leu Asn Lys  
100 105 110  
Leu Lys Leu Val His Ser Asn Leu Glu Asp Asp Pro Glu Glu Ile Arg  
115 120 125  
Met Glu Phe  
130

<210> 5247  
<211> 1004  
<212> DNA  
<213> Homo sapiens

<400> 5247  
nngccatgga aacgaaagcg gccaaagtaga gctccgtcct gacgcgccgc ctcccgtggg  
60  
ctccggcccg ctaagccgcg gcggacaact atgctgaaag ccaagatcct ctccgtgggg  
120  
ccttgcgaga gtggaaaaac tgttttggcc aactttctga cagaatcttc tgacatcact  
180  
gaatacagcc caaccaagg agtgaggatc ctagaatttg agaaccgca tgttaccagc  
240

aacaacaaag gcacgggctg tgaattcgag ctatgggact gtggtggcga tgctaagttt  
300  
gagtcctgct ggccggccct gatgaaggat gctcatggag tggatgatcgt cttcaatgct  
360  
gacatcccaa gccaccggaa ggaaatggag atgtggtatt cctgctttgt ccaacagccg  
420  
tccttacagg acacacagtg tatgctaatt gcacaccaca aaccaggctc tggagatgat  
480  
aaaggaagcc tgtctttgtc gccacccttg aacaagctga agctgggtgca ctcaaacctg  
540  
gaagatgacc ctgaggagat ccggatggaa ttcataaagt atttaaaaag cataatcaac  
600  
tccatgtctg agagcagaga cagggaggag atgtcaatta tgacctagcc agccttcacc  
660  
tgggactgcc acatccccag tgaaatcagc atgtttctcg gtgcagatct gaaatcacat  
720  
ccagctcctg atgttttctt ctccctctga ctgcagagga agtggttcta cctgcaggaa  
780  
ggcacctgtc acacagggcg ttcactcaga ccatctgtgc tctgccctga gttcagttga  
840  
gaaaatccta ttatcaaatt tggatttcct ggccccagaa cttcccaaag acctgtaaaa  
900  
tggagggatt taccacctca catatgtcca gttaaacagt ttgtggactt gtaaccgtcg  
960  
cagcccaatg atacaacagt agtttaatca cgtgaaaaaa aaaa  
1004

&lt;210&gt; 5248

&lt;211&gt; 185

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5248

Met	Leu	Lys	Ala	Lys	Ile	Leu	Phe	Val	Gly	Pro	Cys	Glu	Ser	Gly	Lys
1				5					10					15	
Thr	Val	Leu	Ala	Asn	Phe	Leu	Thr	Glu	Ser	Ser	Asp	Ile	Thr	Glu	Tyr
			20					25					30		
Ser	Pro	Thr	Gln	Gly	Val	Arg	Ile	Leu	Glu	Phe	Glu	Asn	Pro	His	Val
			35					40				45			
Thr	Ser	Asn	Asn	Lys	Gly	Thr	Gly	Cys	Glu	Phe	Glu	Leu	Trp	Asp	Cys
		50				55					60				
Gly	Gly	Asp	Ala	Lys	Phe	Glu	Ser	Cys	Trp	Pro	Ala	Leu	Met	Lys	Asp
65					70				75					80	
Ala	His	Gly	Val	Val	Ile	Val	Phe	Asn	Ala	Asp	Ile	Pro	Ser	His	Arg
				85				90						95	
Lys	Glu	Met	Glu	Met	Trp	Tyr	Ser	Cys	Phe	Val	Gln	Gln	Pro	Ser	Leu
			100					105					110		
Gln	Asp	Thr	Gln	Cys	Met	Leu	Ile	Ala	His	His	Lys	Pro	Gly	Ser	Gly
		115				120						125			
Asp	Asp	Lys	Gly	Ser	Leu	Ser	Leu	Ser	Pro	Pro	Leu	Asn	Lys	Leu	Lys
		130				135					140				
Leu	Val	His	Ser	Asn	Leu	Glu	Asp	Asp	Pro	Glu	Glu	Ile	Arg	Met	Glu
145				150					155					160	
Phe	Ile	Lys	Tyr	Leu	Lys	Ser	Ile	Ile	Asn	Ser	Met	Ser	Glu	Ser	Arg

165 170 175  
 Asp Arg Glu Glu Met Ser Ile Met Thr  
 180 185  
 <210> 5249  
 <211> 653  
 <212> DNA  
 <213> Homo sapiens  
 <400> 5249  
 nnacgcgtgc ggcgccaccgg cccggcaggt gctgtcctta ttcccagccc agtcaagagc  
 60  
 taccgggggt ggctagtcac gggggagccc agtagagagg agtataaaat ccagtccttt  
 120  
 gatgcagaga cccagcagct gctgaagaca gcactcaaag atccgggtgc tgtggacttg  
 180  
 gagaaagtgg ccaatgtgat tgtggaccat tctctgcagg actgtgtgtt cagcaaggaa  
 240  
 gcaggacgca tgtgctacgc catcattcag gcagagagta aacaagcagg ccagagtgtc  
 300  
 ttccgacgtg gactcctcaa ccggctgcag caggagtacc aggctcggga gcagctgcga  
 360  
 gcacgtccc tgcagggtg ggtctgctat gtcaccttta tctgcaacat ctttgactac  
 420  
 ctgagggtga acaacatgcc catgatggcc ctggtgaacc ctgtctatga ctgcctcttc  
 480  
 cggctggccc agccagacag tttgagcaag gaggaggagg tggactgttt ggtgctgcag  
 540  
 ctgcaccggg ttggggagca gctggagaaa atgaatgggc agcgcatgga tgagctcttt  
 600  
 gtgctgatcc gggatggctt cctgctccca actggcctca gtcctctggc cca  
 653

<210> 5250  
 <211> 217  
 <212> PRT  
 <213> Homo sapiens

<400> 5250  
 Xaa Arg Val Arg Ala Thr Gly Pro Ala Gly Ala Val Leu Ile Pro Ser  
 1 5 10 15  
 Pro Val Lys Ser Tyr Arg Gly Trp Leu Val Met Gly Glu Pro Ser Arg  
 20 25 30  
 Glu Glu Tyr Lys Ile Gln Ser Phe Asp Ala Glu Thr Gln Gln Leu Leu  
 35 40 45  
 Lys Thr Ala Leu Lys Asp Pro Gly Ala Val Asp Leu Glu Lys Val Ala  
 50 55 60  
 Asn Val Ile Val Asp His Ser Leu Gln Asp Cys Val Phe Ser Lys Glu  
 65 70 75 80  
 Ala Gly Arg Met Cys Tyr Ala Ile Ile Gln Ala Glu Ser Lys Gln Ala  
 85 90 95  
 Gly Gln Ser Val Phe Arg Arg Gly Leu Leu Asn Arg Leu Gln Gln Glu  
 100 105 110  
 Tyr Gln Ala Arg Glu Gln Leu Arg Ala Arg Ser Leu Gln Gly Trp Val

115						120					125				
Cys	Tyr	Val	Thr	Phe	Ile	Cys	Asn	Ile	Phe	Asp	Tyr	Leu	Arg	Val	Asn
130						135					140				
Asn	Met	Pro	Met	Met	Ala	Leu	Val	Asn	Pro	Val	Tyr	Asp	Cys	Leu	Phe
145						150					155				
Arg	Leu	Ala	Gln	Pro	Asp	Ser	Leu	Ser	Lys	Glu	Glu	Glu	Val	Asp	Cys
165						170					175				
Leu	Val	Leu	Gln	Leu	His	Arg	Val	Gly	Glu	Gln	Leu	Glu	Lys	Met	Asn
180						185					190				
Gly	Gln	Arg	Met	Asp	Glu	Leu	Phe	Val	Leu	Ile	Arg	Asp	Gly	Phe	Leu
195						200					205				
Leu	Pro	Thr	Gly	Leu	Ser	Ser	Leu	Ala							
210						215									

```
<210> 5251
<211> 372
<212> DNA
<213> Homo sapiens
```

```
<400> 5251
atgaacaggc gtgttatatc tgctaacca tatctagggg gcacctccaa cggctatgcc
60
caccacagcg ggacggcact tcattatgac gatgtcccggt gcatcaacgg ctcggggggaa
120
ccggaagacg gctttcctgc tttctgcagc agaagcttgg gagaagaagg ggcttttgaa
180
aaccaggcc tgtacgataa ctggccgcct ccgcacatct ttgcccgcta ctctcctgct
240
gacagaaagg cctctaggct gtctgctgac aagctgtcct ctaaccatta caaataccct
300
gcctctgctc agtctgtcac taatacctct tctgtgggga gggcgtctct cgggctcaac
360
tcgcagcctc ag
372
```

```
<210> 5252
<211> 124
<212> PRT
<213> Homo sapiens
```

```

<400> 5252
Met Asn Arg Arg Val Ile Ser Ala Asn Pro Tyr Leu Gly Gly Thr Ser
 1                    5                      10                      15
Asn Gly Tyr Ala His Pro Ser Gly Thr Ala Leu His Tyr Asp Asp Val
    20                      25                      30
Pro Cys Ile Asn Gly Ser Gly Glu Pro Glu Asp Gly Phe Pro Ala Phe
    35                      40                      45
Cys Ser Arg Ser Leu Gly Glu Glu Gly Ala Phe Glu Asn Pro Gly Leu
    50                      55                      60
Tyr Asp Asn Trp Pro Pro Pro His Ile Phe Ala Arg Tyr Ser Pro Ala
65                      70                      75                      80
Asp Arg Lys Ala Ser Arg Leu Ser Ala Asp Lys Leu Ser Ser Asn His
    85                      90                      95
Tyr Lys Tyr Pro Ala Ser Ala Gln Ser Val Thr Asn Thr Ser Ser Val

```



100 105 110  
Gly Arg Ala Ser Leu Gly Leu Asn Ser Gln Pro Gln  
115 120

<210> 5253  
<211> 898  
<212> DNA  
<213> Homo sapiens

<400> 5253  
ngaatatcca tgcagcgatc ctcaaggaca aactctgctg ctttttctct ttgtggattt  
60  
ccacagtgc tttccagtcc agcaaagga aatctgggga gtctatactt tgctcacaac  
120  
tcacttcaat gccatccttg tggagagcca cagtgtagt caaggttcca tccaattcac  
180  
tgtggacaag gtcttgagc aacatcacca ggctgccaag gctcagcaga aactacaggc  
240  
ctcactctca gtggctgtga actccatcat gagtattctg actggaagca ctaggagcag  
300  
cttccgaaag atgtgtctcc agacccttca agcagctgac acacaagagt tcaggaccaa  
360  
actgcacaaa gtatttcgtg agatcaccca acaccaattt cttcaccact gctcatgtga  
420  
gggtgaagcag cagctaacc tagaaaaaaa ggactcagcc cagggcactg aggacgcacc  
480  
tgataacagc agcctggagc tcctagcaga taccagcggg caagcagaaa acaagaggct  
540  
caagaggggc agccccgc tagaggagat gcgagctctg cgctctgcc gggccccgag  
600  
cccgtcagag gccgccccgc gccgcccga agccaccgc gccccctca ctcttagagg  
660  
aaggagcac cgcgaggctc acggcagggc cctggcgccg ggcagggcga gctcgggaag  
720  
ccgcctggag gacgtgctgt ggctgcagga ggtctccaac ctgtcagagt ggctgagtcc  
780  
cagccctggg ccctgagccg ggtcccttc cgcaagcgcc caccgatccg gaggtgcgg  
840  
gcagccgta tcccgtggt taataaagct gccgcgcgt caaaaaaaaa aaaaaaaaa  
898

<210> 5254  
<211> 56  
<212> PRT  
<213> Homo sapiens

<400> 5254  
Gln Gln Pro Gly Ala Pro Ser Arg Tyr Gln Arg Ala Ser Arg Lys Gln  
1 5 10 15  
Glu Ala Gln Glu Gly Gln Pro Pro His Arg Gly Asp Ala Ser Ser Ala  
20 25 30  
Leu Cys Gln Gly Pro Glu Pro Val Arg Gly Arg Pro Ala Pro Pro Gly  
35 40 45  
Ser His Arg Gly Pro Pro His Ser

50

55

<210> 5255  
<211> 1410  
<212> DNA  
<213> Homo sapiens

<400> 5255  
nncctgcctc cctcaggcac cagatccagt gtcctagtga aacgctggat cctagatccc  
60  
caacccccaga tccccatgcc tcgagccctg gatctccaag ctcagctgct ggattctgga  
120  
tgtcaacaaa cctcaccact ggatcctgac aaccacaatg cctggatcct ggggceccca  
180  
tcactggatc ccagatcccc tcactccacc cactggattc ctgcattggt ttttggtttt  
240  
ttgttttttt ttaacctega cactgggtct cagatccttc tgetgactgc cagatccctg  
300  
catttcaagc actacgcctt ccacccccag gcactggatc ccagattccc aagccttcac  
360  
ccaccagatt ctggtccta aaacaagtgc gggggcccca gtggcacagc aagtggatcc  
420  
tggcaactgc agctgctgga ttccagattc tgggtcccca atccctctgc ccagtccctc  
480  
aatgttgaaa cctcatctct tgaaggcaga tcctgatatt ccaaggcact gaatcccaag  
540  
ccctgaatcc ccggtttctg atctgaatct tccaggcgcc ggggtcccaa tgttcaggcc  
600  
ccaagtctag atcctggcag ccagtcaca gagtatccca cacacactgg tgcccagagc  
660  
cggcttctca tgacatgaaa ttgcatggtc gagggagtct gtggggaagg aagcccaggt  
720  
cctggctgca acctgcacgg atgctggatt cccctcacc ccacctctgc atggccaccc  
780  
cctcccagcc ctgtggggaa actgttcctt ggaaccactc cactccctgc atccccacac  
840  
ttcacagcat cttccatccc cctcccacct tctaggcgaa tagtccccag agctgtgttc  
900  
ctccaagggg tccgaggaat cactcactcc tggaggctgg caaggagaca gtctgaggcc  
960  
agggacacat gaagggatgt cccacccca gcactatcag ggcctccca ggcttccaga  
1020  
gttgaaagcc aggagaaaat cggcaaagac cacccttccc taaaccaag caccatga  
1080  
tgcaaaaaac aaaaacaaaa aaaaccacca aatccccaaa ttcattccag atctattttt  
1140  
ctaccagaga gaggagcaaa gtcctcctcc cctgcgccct tacattctgc acttcatagt  
1200  
tggattctga gcttaggac atctggagac cccatggagg gacttggaag ggggaactgg  
1260  
gatttgggga ggggctggag gacttccgca cgcttccacc tccttcgacc tccactgcgc  
1320  
cccacctccc tgctgtgtg tggtatttca aaggaaaaga acaaaaggaa taaattttct  
1380

aagctcttta aaaaaaaaaa aaaaaaaaaa  
1410

<210> 5256  
<211> 95  
<212> PRT  
<213> Homo sapiens

<400> 5256  
Met Val Glu Gly Val Cys Gly Glu Gly Ser Pro Gly Pro Gly Cys Asn  
1 5 10 15  
Leu His Gly Cys Trp Ile Pro Pro His Pro Thr Ser Ala Trp Pro Pro  
20 25 30  
Pro Pro Ser Pro Val Gly Lys Leu Phe Pro Gly Thr Thr Pro Leu Pro  
35 40 45  
Ala Ser Pro His Phe Thr Ala Ser Ser Ile Pro Leu Pro Pro Ser Arg  
50 55 60  
Arg Ile Val Pro Arg Ala Val Phe Leu Gln Gly Val Arg Gly Ile Thr  
65 70 75 80  
His Ser Trp Arg Leu Ala Arg Arg Gln Ser Glu Ala Arg Asp Thr  
85 90 95

<210> 5257  
<211> 1366  
<212> DNA  
<213> Homo sapiens

<400> 5257  
ncaggctctg tgttggttg agcgagcatg tgggtctgca gtacctgtg gcgggtgcga  
60  
accccgcccg gcagtggcgg gggcctgctc ccagcttctg gctgtcacgg acctgccgcc  
120  
tcctcctact ccgcatccgc cgagcctgcc cgggtccgcg gccttgtcta tgggcaccac  
180  
ggggatccag ccaaggctgt cgaactcaag aacctggagc tagctgctgt gagaggatca  
240  
gatgtccgtg tgaagatgct ggcggcccct atcaatccat ctgacataaa tatgatccaa  
300  
ggaaactacg gactccttcc tgaactgcct gctggttgag ggaacgaagg tgttgcacag  
360  
gtggtagcgg tgggcagcaa tgtgaccggg ctgaagccag gagactgggt gattccagca  
420  
aatgctggtt tagactcagg aacctggcgg accgaggctg tgttcagcga ggaagcactg  
480  
atccaagttc cgagtgcacat ccctcttcag agcgtgcca ccctgggtgt caatccctgc  
540  
acagcctaca ggatgttgat ggacttcgag caactgcagc caggggatcc tgtcatccag  
600  
aatgcatcca acagcggagt ggggcaagca gtcattccaga tcgccgcagc cctgggccta  
660  
agaaccatca atgtggtccg agacagacct gatattccaga agctgagtga cagactgaag  
720  
agtctggggg ctgagcatgt catcacagaa gaggagctaa gaaggcccga aatgaaaaac  
780

ttctttaagg acatgcccc gccacggctt gctctcaact gtgttggtgg gaaaagctcc  
 840  
 acagagctgc tgcggcagtt agcgcgtgga ggaacatgg taacctatgg ggggatggcc  
 900  
 aagcagcccg tcgtagcctc tgtgagcctg ctcatTTTTA aggatctcaa acttcgaggc  
 960  
 ttttggttgt cccagtggaa gaaggatcac agtccagacc agttcaagga gctgaccc  
 1020  
 acactgtgcg atctcatccg ccgaggccag ctccagccc ctgctgctc ccagggtccc  
 1080  
 ctgcaggact accagtctgc cttggaagcc tccatgaagc ccttcatatc ttcaaagcag  
 1140  
 attctcacca tgtgatcatc ccaaaagagc tggagtgaca tgggagggga ggcggatctg  
 1200  
 aggggctggg tgcaggcccc tcagttgggg ctcccacctt cccagacta ctgttctcct  
 1260  
 cactgcctct tcctattagg aggatgggtga agccagccac ggTTTTCCCC agggccagcc  
 1320  
 ttaaggatc taataaagtc tgaactctcc cttccaaaaa aaaaaa  
 1366

<210> 5258

<211> 375

<212> PRT

<213> Homo sapiens

<400> 5258

Met	Trp	Val	Cys	Ser	Thr	Leu	Trp	Arg	Val	Arg	Thr	Pro	Pro	Gly	Ser
1				5					10					15	
Gly	Gly	Gly	Leu	Leu	Pro	Ala	Ser	Gly	Cys	His	Gly	Pro	Ala	Ala	Ser
			20					25					30		
Ser	Tyr	Ser	Ala	Ser	Ala	Glu	Pro	Ala	Arg	Val	Arg	Gly	Leu	Val	Tyr
	35					40					45				
Gly	His	His	Gly	Asp	Pro	Ala	Lys	Val	Val	Glu	Leu	Lys	Asn	Leu	Glu
	50					55				60					
Leu	Ala	Ala	Val	Arg	Gly	Ser	Asp	Val	Arg	Val	Lys	Met	Leu	Ala	Ala
65					70				75					80	
Pro	Ile	Asn	Pro	Ser	Asp	Ile	Asn	Met	Ile	Gln	Gly	Asn	Tyr	Gly	Leu
			85					90						95	
Leu	Pro	Glu	Leu	Pro	Ala	Val	Gly	Gly	Asn	Glu	Gly	Val	Ala	Gln	Val
			100					105					110		
Val	Ala	Val	Gly	Ser	Asn	Val	Thr	Gly	Leu	Lys	Pro	Gly	Asp	Trp	Val
			115					120					125		
Ile	Pro	Ala	Asn	Ala	Gly	Leu	Asp	Ser	Gly	Thr	Trp	Arg	Thr	Glu	Ala
			130				135					140			
Val	Phe	Ser	Glu	Glu	Ala	Leu	Ile	Gln	Val	Pro	Ser	Asp	Ile	Pro	Leu
145					150					155				160	
Gln	Ser	Ala	Ala	Thr	Leu	Gly	Val	Asn	Pro	Cys	Thr	Ala	Tyr	Arg	Met
				165				170						175	
Leu	Met	Asp	Phe	Glu	Gln	Leu	Gln	Pro	Gly	Asp	Ser	Val	Ile	Gln	Asn
			180					185					190		
Ala	Ser	Asn	Ser	Gly	Val	Gly	Gln	Ala	Val	Ile	Gln	Ile	Ala	Ala	Ala
		195					200					205			
Leu	Gly	Leu	Arg	Thr	Ile	Asn	Val	Val	Arg	Asp	Arg	Pro	Asp	Ile	Gln

210	215	220
Lys Leu Ser Asp Arg	Leu Lys Ser Leu Gly Ala	Glu His Val Ile Thr
225	230	235
Glu Glu Glu Leu Arg	Arg Pro Glu Met Lys Asn Phe	Phe Lys Asp Met
245	250	255
Pro Gln Pro Arg Leu	Ala Leu Asn Cys Val Gly Gly	Lys Ser Ser Thr
260	265	270
Glu Leu Leu Arg Gln	Leu Ala Arg Gly Gly Thr Met	Val Thr Tyr Gly
275	280	285
Gly Met Ala Lys Gln	Pro Val Val Ala Ser Val	Ser Leu Leu Ile Phe
290	295	300
Lys Asp Leu Lys Leu	Arg Gly Phe Trp Leu Ser	Gln Trp Lys Lys Asp
305	310	315
His Ser Pro Asp Gln	Phe Lys Glu Leu Ile Leu	Thr Leu Cys Asp Leu
325	330	335
Ile Arg Arg Gly Gln	Leu Thr Ala Pro Ala Cys	Ser Gln Val Pro Leu
340	345	350
Gln Asp Tyr Gln Ser	Ala Leu Glu Ala Ser Met	Lys Pro Phe Ile Ser
355	360	365
Ser Lys Gln Ile Leu	Thr Met	
370	375	

&lt;210&gt; 5259

&lt;211&gt; 306

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5259

ctgaattgct gtaggggcag aacacccaag gagacaatag aaaatttggt gcacagaatg  
 60  
 actgaagaga agacgctgac tgctgagggt ttggtaaaac tcctccaggc tgtgaagacg  
 120  
 actttcccaa acctgggcct tctgctagag aagttgcaga aatcagccac tttgccaagc  
 180  
 accacagtcc aaccaagccc tgatgattat gggactgagc tattgagacg ctatcatgaa  
 240  
 aacctctctg agattttcac agacaaccag attttattaa agatgatctc acacatgaca  
 300  
 agtttta  
 306

&lt;210&gt; 5260

&lt;211&gt; 83

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5260

Met Thr Glu Glu Lys Thr	Leu Thr Ala Glu Gly Leu Val	Lys Leu Leu
1	5	10
Gln Ala Val Lys Thr Thr	Phe Pro Asn Leu Gly Leu Leu	Leu Glu Lys
20	25	30
Leu Gln Lys Ser Ala Thr	Leu Pro Ser Thr Thr Val	Gln Pro Ser Pro
35	40	45
Asp Asp Tyr Gly Thr	Glu Leu Leu Arg Arg Tyr	His Glu Asn Leu Ser

50 55 60  
Glu Ile Phe Thr Asp Asn Gln Ile Leu Leu Lys Met Ile Ser His Met  
65 70 75 80  
Thr Ser Leu

<210> 5261  
<211> 2394  
<212> DNA  
<213> Homo sapiens

<400> 5261  
ncggccgcca tggcgacccc ggccaggccc ggcgaggccg aggacgcggc cgagcggccc  
60  
ctccaggatg agccggcggc ggcgggcgga ggcccgggca agggtcgctt cctcgtccgc  
120  
atctgtttcc agggagacga gggcgccctgc ccgaccggg acttcgtggt aggagcgctt  
180  
atcctgcgct ccatcgcat ggacccgagc gacatctacg cggtcacca gatcccgggc  
240  
agccgcgaat tcgacgtgag cttccgctca gcggagaagc tggccctggt cctacgcgtc  
300  
tacgaggaga agcgggagca ggaggactgc tgggagaact ttgtggtgct ggggcggagc  
360  
aagtccagct tgaagacgt cttcatcctc ttccggaacg agacggtgga cgtggaggac  
420  
attgtgactt ggctcaagcg ccaactgcgac gtgctggccg tgccggtgaa agtgaccgac  
480  
aggtttggga tctggaccgg ggagtacaaa tgcgagatcg agctgcgcca gggggagggc  
540  
ggggtcaggc acttgccagg ggccttcttc ctgggggccc agaggggcta cagctggtac  
600  
aaggggcagc ccaagacatg ctttaaagt ggttcccga cccacatgag cggcagctgc  
660  
acgcaggaca ggtgcttcag gtgcggggag gaggggcacc tgagccctta ctgccggaag  
720  
ggcatcgtgt gcaacctctg tggcaagcga ggacacgcct ttgcccagtg tcccaaagca  
780  
gtgcacaatt ccgtggcagc tcagctaacc ggcgtggccg ggcactaaac acccgccctgc  
840  
ctgccagggt gaacacacag ccagcttate cctcttaagt gccaaaactt ttttttaaac  
900  
cattttttat cgtttttgaa ggagatcttt ttaaaaccta caagagacat ctctctatgc  
960  
cttcttaaac cgagtttact ccatttcagc ctgttctgaa ttggtgactc tgtcaccaat  
1020  
aacgactgcg gagaactgta gcgtgcagat gtgttgcccc tcccttttaa aattttatct  
1080  
tcgtttttct attgggtatt tgttttggtt cttgtacttt ttctctctct ccttgccccc  
1140  
ctcccgccct ccccgcccca taccttttct tccctggat tttcaccctt tgggctgcct  
1200  
tgctcatctt tatgccccag cactaggtac ggggcccac acgtggtagg cactccatca  
1260

gtgttttctg aattgaaaac attgttgact gtggcttcta tcagagtgtc taccttttgc  
 1320  
 agctcttccc ctccctcatt taatttgctg cttttaatct acgtgggtctg agaatttgtg  
 1380  
 aaaccagtgt tgtagaagt gtatataatc tgaatcaata agctctgaat ggtggccaag  
 1440  
 ggctctcttt atggcacaaa gatgcatgga cttcatgaca gctcttttgg tggctcagaa  
 1500  
 gccatttttt atagaatcat ggaatctaga atattcctgc tggaaagaac ctgagagtgt  
 1560  
 gtttggaacca attccctggg tttccagcag atgaaacagg cccaaagagg ttaaatgact  
 1620  
 ggggtgaaaat cacatagctg tctggtgcca gagccagcct atagtagagt cccctgacct  
 1680  
 caagcccggt gctcattcca ctacctctca cacttcacaa caatttcctc aacacttgag  
 1740  
 ggcccagaaa gtctgatctc tccagaatga tcagcccaga ggaatgctga gaaatcacct  
 1800  
 ggaggaggga gcagaaagag aagggttttta aggaggggct tctgaatact tgggagatac  
 1860  
 ggaacggacc aaggaccaca ctccaggggtg cattcggtgc tccctggggc accacttctg  
 1920  
 gattacagtg tgccaggtcc tttggaggcc ctacccttc cccattcatt gccaccagt  
 1980  
 agaaatgggg gtgcccctgt gtaaagaaac ctaccaaagg tttacatttg caccttagcc  
 2040  
 tcaatagcta cgaaccctag agaagcagct agctggagct catgtgcaac tcctgattct  
 2100  
 caggagaaag atggatttta acccaaaatt atgagtgagc tgttaactct aaaatgtact  
 2160  
 tgggagatag gccaagcgag aggtcatggg ccaactaagt gttatccagt agaaaagaca  
 2220  
 gtacactgct tttcttttag tgtttgcttt tcctttgcta tatgttttgc tatttccttg  
 2280  
 tggcttagaa tgtaaaattg attgttaaaa gttttgttct gaataaatat ttatcttttg  
 2340  
 tattgccaaa aaacacttga gggcccagaa agtctgatct ctccagaatg atca  
 2394

&lt;210&gt; 5262

&lt;211&gt; 275

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5262

Xaa	Ala	Ala	Met	Ala	Thr	Pro	Ala	Arg	Pro	Gly	Glu	Ala	Glu	Asp	Ala
1			5				10				15				
Ala	Glu	Arg	Pro	Leu	Gln	Asp	Glu	Pro	Ala	Ala	Ala	Ala	Ala	Gly	Pro
			20				25				30				
Gly	Lys	Gly	Arg	Phe	Leu	Val	Arg	Ile	Cys	Phe	Gln	Gly	Asp	Glu	Gly
			35				40				45				
Ala	Cys	Pro	Thr	Arg	Asp	Phe	Val	Val	Gly	Ala	Leu	Ile	Leu	Arg	Ser
			50			55					60				

Ile Gly Met Asp Pro Ser Asp Ile Tyr Ala Val Ile Gln Ile Pro Gly  
 70 75 80  
 Ser Arg Glu Phe Asp Val Ser Phe Arg Ser Ala Glu Lys Leu Ala Leu  
 85 90 95  
 Phe Leu Arg Val Tyr Glu Glu Lys Arg Glu Gln Glu Asp Cys Trp Glu  
 100 105 110  
 Asn Phe Val Val Leu Gly Arg Ser Lys Ser Ser Leu Lys Thr Leu Phe  
 115 120 125  
 Ile Leu Phe Arg Asn Glu Thr Val Asp Val Glu Asp Ile Val Thr Trp  
 130 135 140  
 Leu Lys Arg His Cys Asp Val Leu Ala Val Pro Val Lys Val Thr Asp  
 145 150 155 160  
 Arg Phe Gly Ile Trp Thr Gly Glu Tyr Lys Cys Glu Ile Glu Leu Arg  
 165 170 175  
 Gln Gly Glu Gly Gly Val Arg His Leu Pro Gly Ala Phe Phe Leu Gly  
 180 185 190  
 Ala Glu Arg Gly Tyr Ser Trp Tyr Lys Gly Gln Pro Lys Thr Cys Phe  
 195 200 205  
 Lys Cys Gly Ser Arg Thr His Met Ser Gly Ser Cys Thr Gln Asp Arg  
 210 215 220  
 Cys Phe Arg Cys Gly Glu Glu Gly His Leu Ser Pro Tyr Cys Arg Lys  
 225 230 235 240  
 Gly Ile Val Cys Asn Leu Cys Gly Lys Arg Gly His Ala Phe Ala Gln  
 245 250 255  
 Cys Pro Lys Ala Val His Asn Ser Val Ala Ala Gln Leu Thr Gly Val  
 260 265 270  
 Ala Gly His  
 275

&lt;210&gt; 5263

&lt;211&gt; 319

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5263

tctagaacaa atgagaacca gtatcagaag gtgacacagg agagtttgtg acagtgccga  
 60

tttcagctga cgaattacca gaagatccag cattgctgtc gtttccatca aaagtagctg  
 120

gaagtagata cacattatatt tctgacaggg gggaagtatc agaagaaagc atgttggttg  
 180

tgccttgga aatctttttt gggtgatatt gaaatgccat ttcaccagtt tcaagccttc  
 240

ttccaagag tgacttatct gtatcttact ttgtagcttc cattcagaca ttgttgctct  
 300

atttattaaa tccatggct  
 319

&lt;210&gt; 5264

&lt;211&gt; 105

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5264



Met Asp Leu Ile Asn Arg Ala Thr Met Ser Glu Trp Lys Leu Gln Ser  
 1 5 10 15  
 Lys Ile Gln Ile Ser His Ser Trp Glu Glu Gly Leu Lys Leu Val Lys  
 20 25 30  
 Trp His Phe Asn Ile Asn Gln Lys Arg Phe Ser Lys Ala Gln Pro Thr  
 35 40 45  
 Cys Phe Leu Leu Ile Leu Pro Pro Cys Gln Lys Ile Met Cys Ile Tyr  
 50 55 60  
 Phe Gln Leu Leu Leu Met Glu Thr Thr Ala Met Leu Asp Leu Leu Val  
 65 70 75 80  
 Ile Arg Gln Leu Lys Ser Ala Leu Ser Gln Thr Leu Leu Cys His Leu  
 85 90 95  
 Leu Ile Leu Val Leu Ile Cys Ser Arg  
 100 105

&lt;210&gt; 5265

&lt;211&gt; 3203

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5265

cgccccgggca ggtcggagac ggaggaaagg tggcagccag attacttaga gaggcacaga  
 60  
 ggagagagat cggggtgagt cgccatgggg actcccaggg cccagcaccc gccgcctccc  
 120  
 cagctgctgt tcctaattct gctgagctgt ccctggatcc agggctctgcc cctgaaggag  
 180  
 gagagatat tgccagagcc tggaagttag acccccacgg tggcctctga ggccctggct  
 240  
 gaactgcttc atggggccct gctgaggagg ggcccagaga tgggctacct gccagggcct  
 300  
 ccccttgggc ctgaggagg agaggaggag acgacgacca ccatcatcac cacgacaact  
 360  
 gttaccacta cggtgaccag ccagttctg tgtaataaca acatctccga gggcgaaggg  
 420  
 tatgtggagt ctccagatct ggggagcccc gtcagccgca ccctggggct cctggactgc  
 480  
 acttacagca tccatgtcta ccctggctac ggcatgaga tccaggtgca gacgctgaac  
 540  
 ctgtcacagg aagaggagct cctgggtgctg gctgggtggg gatccccagg cctggcccc  
 600  
 cgactcctgg ccaactcatc catgcttggga gaaggacaag tccttcggag cccaaccaac  
 660  
 cggctgcttc tgcacttcca gagcccacgg gtcccaagg gcggtggctt caggatccac  
 720  
 tatcaggcct acctcctgag ctgtggcttc cctccccggc cggcccatgg ggacgtgagt  
 780  
 gtgacggacc tgcaccctgg gggcactgcc acctttcact gtgattcggg ctaccagctg  
 840  
 cagggagagg agaccctcat ctgcctcaat ggcacccggc catcctggaa cggtgaaacc  
 900  
 cccagctgca tggcatcctg tgggtggcacc atccacaatg ccacctggg ccgcatcgtg  
 960

tccccagagc ctgggggagc cgtagggccc aacctcacct gccgttgggt cattgaagca  
1020  
gctgaggggc gccggctgca cctgcacttt gaaagggctc cgctggatga ggacaatgac  
1080  
cggctgatgg tgcgctcagg gggcagcccc ctatcccccg tgatctatga ttcggacatg  
1140  
gacgatgtcc ccgagcgggg tctcatcagt gacgccagc ccctctacgt ggagctgctg  
1200  
tcagagacac ctgccaatcc cctgctgtta agccttcgat ttgaagcctt tgaggaggat  
1260  
cgctgcttcg ccccttcctt ggcacatgga aatgtcacta ccacggaccc tgagtatcgc  
1320  
ccaggggcac tggcaacctt ctctgcctc ccaggatatg ccctggagcc ccctgggccc  
1380  
cccaatgcca tcgaatgtgt ggatcccaca gaacccact ggaacgacac agagccggcc  
1440  
tgcaaagcca tgtgtggagg ggagctgtcg gaaccagctg gcgtggctct ctctcccgac  
1500  
tggccccaga gctatagccc gggccaagac tgcgtgtggg gcgtgcacgt ccaggaagag  
1560  
aagcgcctct tgctccaagt tgagatattg aatgtgcggg aaggggacat gctgacgctg  
1620  
ttcgacgggg acggtcccag cggccgagtc ttggcccagc tgcggggacc tcagccgcgc  
1680  
cgccgccttc tctcctctgg gcccgacctc acactgcagt ttcaggcacc gcccgggccc  
1740  
ccaaatccag gcctgggcca gggcttcgta ttgcattca aagaggctcc gaggaacgac  
1800  
acgtgccccg agctgccacc tccggagtgg ggctggagaa cggcatccca cggggacctg  
1860  
atccggggca cgggtgtcac ctaccagtgc gagcctggct acgagctgct aggctccgac  
1920  
attctcactt gccagtggga cctgtcttgg agcgccgcgc cgcccgctg ccaaaagatc  
1980  
atgacttgtg ctgaccctgg cgagattgcc aacgggcacc gcaccgcctc ggacgccggc  
2040  
ttccccgttg gctcccacgt ccagtaccgc tgcctgccag ggtacagcct cgagggggca  
2100  
gccatgctca cctgctacag ccgggacaca ggcacacca agtgagagca tagggctccc  
2160  
aaatgcgcct tgaagtacga gccgtgcctg aaccggggg ttcccgagaa tggctaccag  
2220  
acgctgtaca agcaccacta ccaggcgggc gagtctctgc gcttctctg ctatgagggc  
2280  
tttgagctta tcggcgaggt caccatcacc tgtgtgccc gccacccctc ccagtggacc  
2340  
agccagcccc cactctgcaa agttgcctat gaggagctcc tggacaaccg aaaactggaa  
2400  
gtgaccaga ccacagatcc atcacggcag ctggaagggg ggaacctggc cctggccatc  
2460  
ctgctgcctc taggcttggc cattgtcctc ggcagtggcg ttacatcta ctacaccaag  
2520  
cttcaggga agtccctttt cggcttctcg ggctcccact cctacagccc catcaccgtg  
2580

gagtcggact tcagcaaccc gctgtatgaa gctggggata cgcgggagta tgaagtttcc  
 2640  
 atctgaaccc caagactaca gctgcaggac ccaggacgcc cctccccctcc tcattcgggc  
 2700  
 agagggaaat acgggacccg gtctctgcct cctggctgcc ctctccctg gctgtgtaaa  
 2760  
 tagtctccct atcccacgag ggggctttga tggccctgga gatcctacag taaataaacc  
 2820  
 agcatcctgc cgcccaaagc cgcctcttct cagttgccaa acgagggggc tgccccccgc  
 2880  
 cctaccggct tttggattct gggaggggaa ctctgcctcc ctgcaaactc tgcagcccct  
 2940  
 cctgcccagg gcacccctca aggactgccc ccgatagctc tactgttccc ttggccacga  
 3000  
 aggtgcccccc ctcccagatg ccctggccct aggctgact ccggccagga gggtcagaag  
 3060  
 aaggacaaag gggagagctg ggacaaggcc ttgccccctt cctgccatct cccaaccca  
 3120  
 cagtctctcc accttgctt ctgaattctt gtttttgagc aataaacaga aaatcgccac  
 3180  
 ttgtaaaaaa aaaaaaaaaa aaa  
 3203

<210> 5266

<211> 853

<212> PRT

<213> Homo sapiens

<400> 5266

Met	Gly	Thr	Pro	Arg	Ala	Gln	His	Pro	Pro	Pro	Pro	Gln	Leu	Leu	Phe
1				5				10					15		
Leu	Ile	Leu	Leu	Ser	Cys	Pro	Trp	Ile	Gln	Gly	Leu	Pro	Leu	Lys	Glu
		20						25					30		
Glu	Glu	Ile	Leu	Pro	Glu	Pro	Gly	Ser	Glu	Thr	Pro	Thr	Val	Ala	Ser
		35					40					45			
Glu	Ala	Leu	Ala	Glu	Leu	Leu	His	Gly	Ala	Leu	Leu	Arg	Arg	Gly	Pro
	50					55					60				
Glu	Met	Gly	Tyr	Leu	Pro	Gly	Pro	Pro	Leu	Gly	Pro	Glu	Gly	Gly	Glu
65					70					75				80	
Glu	Glu	Thr	Thr	Thr	Thr	Ile	Ile	Thr	Thr	Thr	Thr	Val	Thr	Thr	Thr
			85					90					95		
Val	Thr	Ser	Pro	Val	Leu	Cys	Asn	Asn	Asn	Ile	Ser	Glu	Gly	Glu	Gly
			100				105						110		
Tyr	Val	Glu	Ser	Pro	Asp	Leu	Gly	Ser	Pro	Val	Ser	Arg	Thr	Leu	Gly
		115					120					125			
Leu	Leu	Asp	Cys	Thr	Tyr	Ser	Ile	His	Val	Tyr	Pro	Gly	Tyr	Gly	Ile
	130					135					140				
Glu	Ile	Gln	Val	Gln	Thr	Leu	Asn	Leu	Ser	Gln	Glu	Glu	Glu	Leu	Leu
145				150						155				160	
Val	Leu	Ala	Gly	Gly	Gly	Ser	Pro	Gly	Leu	Ala	Pro	Arg	Leu	Leu	Ala
			165					170					175		
Asn	Ser	Ser	Met	Leu	Gly	Glu	Gly	Gln	Val	Leu	Arg	Ser	Pro	Thr	Asn
		180					185					190			
Arg	Leu	Leu	Leu	His	Phe	Gln	Ser	Pro	Arg	Val	Pro	Arg	Gly	Gly	Gly

		195					200					205				
Phe	Arg	Ile	His	Tyr	Gln	Ala	Tyr	Leu	Leu	Ser	Cys	Gly	Phe	Pro	Pro	
	210					215					220					
Arg	Pro	Ala	His	Gly	Asp	Val	Ser	Val	Thr	Asp	Leu	His	Pro	Gly	Gly	
225					230					235					240	
Thr	Ala	Thr	Phe	His	Cys	Asp	Ser	Gly	Tyr	Gln	Leu	Gln	Gly	Glu	Glu	
				245					250					255		
Thr	Leu	Ile	Cys	Leu	Asn	Gly	Thr	Arg	Pro	Ser	Trp	Asn	Gly	Glu	Thr	
			260					265					270			
Pro	Ser	Cys	Met	Ala	Ser	Cys	Gly	Gly	Thr	Ile	His	Asn	Ala	Thr	Leu	
		275					280					285				
Gly	Arg	Ile	Val	Ser	Pro	Glu	Pro	Gly	Gly	Ala	Val	Gly	Pro	Asn	Leu	
	290					295					300					
Thr	Cys	Arg	Trp	Val	Ile	Glu	Ala	Ala	Glu	Gly	Arg	Arg	Leu	His	Leu	
305					310					315					320	
His	Phe	Glu	Arg	Val	Ser	Leu	Asp	Glu	Asp	Asn	Asp	Arg	Leu	Met	Val	
				325					330					335		
Arg	Ser	Gly	Gly	Ser	Pro	Leu	Ser	Pro	Val	Ile	Tyr	Asp	Ser	Asp	Met	
			340					345					350			
Asp	Asp	Val	Pro	Glu	Arg	Gly	Leu	Ile	Ser	Asp	Ala	Gln	Ser	Leu	Tyr	
	355						360					365				
Val	Glu	Leu	Leu	Ser	Glu	Thr	Pro	Ala	Asn	Pro	Leu	Leu	Leu	Ser	Leu	
	370					375					380					
Arg	Phe	Glu	Ala	Phe	Glu	Glu	Asp	Arg	Cys	Phe	Ala	Pro	Phe	Leu	Ala	
385					390					395					400	
His	Gly	Asn	Val	Thr	Thr	Thr	Asp	Pro	Glu	Tyr	Arg	Pro	Gly	Ala	Leu	
				405					410					415		
Ala	Thr	Phe	Ser	Cys	Leu	Pro	Gly	Tyr	Ala	Leu	Glu	Pro	Pro	Gly	Pro	
			420					425					430			
Pro	Asn	Ala	Ile	Glu	Cys	Val	Asp	Pro	Thr	Glu	Pro	His	Trp	Asn	Asp	
		435					440					445				
Thr	Glu	Pro	Ala	Cys	Lys	Ala	Met	Cys	Gly	Gly	Glu	Leu	Ser	Glu	Pro	
	450					455					460					
Ala	Gly	Val	Val	Leu	Ser	Pro	Asp	Trp	Pro	Gln	Ser	Tyr	Ser	Pro	Gly	
465					470					475					480	
Gln	Asp	Cys	Val	Trp	Gly	Val	His	Val	Gln	Glu	Glu	Lys	Arg	Ile	Leu	
				485					490					495		
Leu	Gln	Val	Glu	Ile	Leu	Asn	Val	Arg	Glu	Gly	Asp	Met	Leu	Thr	Leu	
			500					505					510			
Phe	Asp	Gly	Asp	Gly	Pro	Ser	Ala	Arg	Val	Leu	Ala	Gln	Leu	Arg	Gly	
	515						520					525				
Pro	Gln	Pro	Arg	Arg	Arg	Leu	Leu	Ser	Ser	Gly	Pro	Asp	Leu	Thr	Leu	
	530					535						540				
Gln	Phe	Gln	Ala	Pro	Pro	Gly	Pro	Pro	Asn	Pro	Gly	Leu	Gly	Gln	Gly	
545					550					55						

625                      630                      635                      640  
 Ile Ala Asn Gly His Arg Thr Ala Ser Asp Ala Gly Phe Pro Val Gly  
                                  645                      650                      655  
 Ser His Val Gln Tyr Arg Cys Leu Pro Gly Tyr Ser Leu Glu Gly Ala  
                                  660                      665                      670  
 Ala Met Leu Thr Cys Tyr Ser Arg Asp Thr Gly Thr Pro Lys Trp Ser  
                                  675                      680                      685  
 Asp Arg Val Pro Lys Cys Ala Leu Lys Tyr Glu Pro Cys Leu Asn Pro  
                                  690                      695                      700  
 Gly Val Pro Glu Asn Gly Tyr Gln Thr Leu Tyr Lys His His Tyr Gln  
 705                                   710                                   715                                   720  
 Ala Gly Glu Ser Leu Arg Phe Phe Cys Tyr Glu Gly Phe Glu Leu Ile  
                                  725                                   730                                   735  
 Gly Glu Val Thr Ile Thr Cys Val Pro Gly His Pro Ser Gln Trp Thr  
                                  740                                   745                                   750  
 Ser Gln Pro Pro Leu Cys Lys Val Ala Tyr Glu Glu Leu Leu Asp Asn  
                                  755                                   760                                   765  
 Arg Lys Leu Glu Val Thr Gln Thr Thr Asp Pro Ser Arg Gln Leu Glu  
                                  770                                   775                                   780  
 Gly Gly Asn Leu Ala Leu Ala Ile Leu Leu Pro Leu Gly Leu Val Ile  
 785                                   790                                   795                                   800  
 Val Leu Gly Ser Gly Val Tyr Ile Tyr Tyr Thr Lys Leu Gln Gly Lys  
                                  805                                   810                                   815  
 Ser Leu Phe Gly Phe Ser Gly Ser His Ser Tyr Ser Pro Ile Thr Val  
                                  820                                   825                                   830  
 Glu Ser Asp Phe Ser Asn Pro Leu Tyr Glu Ala Gly Asp Thr Arg Glu  
                                  835                                   840                                   845  
 Tyr Glu Val Ser Ile  
 850

&lt;210&gt; 5267

&lt;211&gt; 885

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5267

ttcggcacga ggggcaccat gctgcaagga gagtatacct actctttggg ccaagtttat  
 60  
 gatcccacca caacctacct tggagctcct gtcttctatg ccccccagac ctatgcagca  
 120  
 attcccagtc ttcatttccc agccaccaa ggacatctca gcaacagagc cattatccga  
 180  
 gcccttctg ttagagaaat ttacatgaat gtacctgtag gggctgcggg agtgagagga  
 240  
 ctgggcggcc gtggctatctt ggcatacaca ggcctgggtc gaggatacca ggtcaaagga  
 300  
 gacaaaagag aagacaaact ctatgacatt ttacctggga tggagctcac cccaatgaat  
 360  
 cctgtcacat taaaacccca aggaattaaa ctgctctccc agatattaga agagatttgt  
 420  
 cagaaaaata actggggaca gccagtgtac cagctgcact ctgctattgg acaagaccaa  
 480  
 agacagctat tcttgtacaa aataactatt cctgctctag ccagccagaa tcttgaatc  
 540

caccctttca cacctccaaa gctgagtgcc tttgtggatg aagcaaagac gtatgcagcc  
 600  
 gaatacaccc tgcagaccct gggcatcccc actgatggag gcgatggcac catggctact  
 660  
 gctgctgctg ctgctactgc tttcccagga tatgctgtcc ctaatgcaac tgcacccgtg  
 720  
 tctgcagccc agctcaagca agcggtaacc cttggacaag acttagcagc atatacaacc  
 780  
 tatgaggtct acccaacttt tgcagtgact gcccgagggg atggatatgg caccttctga  
 840  
 agatgctttt ttaaatttaa gaataagaca cacaaaactc tatta  
 885

&lt;210&gt; 5268

&lt;211&gt; 279

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5268

Phe	Gly	Thr	Arg	Gly	Thr	Met	Leu	Gln	Gly	Glu	Tyr	Thr	Tyr	Ser	Leu
1				5					10					15	
Gly	Gln	Val	Tyr	Asp	Pro	Thr	Thr	Thr	Tyr	Leu	Gly	Ala	Pro	Val	Phe
			20					25					30		
Tyr	Ala	Pro	Gln	Thr	Tyr	Ala	Ala	Ile	Pro	Ser	Leu	His	Phe	Pro	Ala
		35					40					45			
Thr	Lys	Gly	His	Leu	Ser	Asn	Arg	Ala	Ile	Ile	Arg	Ala	Pro	Ser	Val
	50					55					60				
Arg	Glu	Ile	Tyr	Met	Asn	Val	Pro	Val	Gly	Ala	Ala	Gly	Val	Arg	Gly
65					70					75				80	
Leu	Gly	Gly	Arg	Gly	Tyr	Leu	Ala	Tyr	Thr	Gly	Leu	Gly	Arg	Gly	Tyr
			85						90				95		
Gln	Val	Lys	Gly	Asp	Lys	Arg	Glu	Asp	Lys	Leu	Tyr	Asp	Ile	Leu	Pro
			100					105					110		
Gly	Met	Glu	Leu	Thr	Pro	Met	Asn	Pro	Val	Thr	Leu	Lys	Pro	Gln	Gly
		115					120					125			
Ile	Lys	Leu	Ala	Pro	Gln	Ile	Leu	Glu	Glu	Ile	Cys	Gln	Lys	Asn	Asn
	130					135					140				
Trp	Gly	Gln	Pro	Val	Tyr	Gln	Leu	His	Ser	Ala	Ile	Gly	Gln	Asp	Gln
145					150					155				160	
Arg	Gln	Leu	Phe	Leu	Tyr	Lys	Ile	Thr	Ile	Pro	Ala	Leu	Ala	Ser	Gln
			165						170					175	
Asn	Pro	Ala	Ile	His	Pro	Phe	Thr	Pro	Pro	Lys	Leu	Ser	Ala	Phe	Val
			180					185					190		
Asp	Glu	Ala	Lys	Thr	Tyr	Ala	Ala	Glu	Tyr	Thr	Leu	Gln	Thr	Leu	Gly
		195					200					205			
Ile	Pro	Thr	Asp	Gly	Gly	Asp	Gly	Thr	Met	Ala	Thr	Ala	Ala	Ala	Ala
	210					215					220				
Ala	Thr	Ala	Phe	Pro	Gly	Tyr	Ala	Val	Pro	Asn	Ala	Thr	Ala	Pro	Val
225					230					235				240	
Ser	Ala	Ala	Gln	Leu	Lys	Gln	Ala	Val	Thr	Leu	Gly	Gln	Asp	Leu	Ala
			245						250				255		
Ala	Tyr	Thr	Thr	Tyr	Glu	Val	Tyr	Pro	Thr	Phe	Ala	Val	Thr	Ala	Arg
			260					265					270		
Gly	Asp	Gly	Tyr	Gly	Thr	Phe									

275

&lt;210&gt; 5269

&lt;211&gt; 1177

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5269

nngctttctc cagtgggat ttaagactta caggatttcc tcttatggaa tagttcctag  
60  
tctactagct caagtagtca ggagaataat tctgccc aaa gcagtctgct tccttccatg  
120  
aatgaacagt cacagaagac aaaaaatata tccagctttg attctgagct gtttctagaa  
180  
gaactggatg aattgcctcc attgtctcca atgcagccaa tttcagagga agaggctatt  
240  
cagattattg cagaccctcc attgccacca gcttcattca cacttcgaga ctatgtggat  
300  
cattctgaga ctctgcagaa gttgggttctt ctaggcgtgg atttgtccaa gatagaaaaa  
360  
catccagaag cagcaaacct ccttctgaga ctggattttg aaaaagacat taagcaaatg  
420  
cttctgtttc ttaaagatgt gggatatagag gataaccaac tgggagcatt cctgacaaaa  
480  
aatcatgcaa ttttctctga agaccttgaa aatctgaaga ccagggtggc ttatctgcat  
540  
tcaaaaaatt tcagtaaagc agatgttgca cagatggcca gaaaagcacc atttttgctg  
600  
aacttttcag tggaaagact ggataacaga ttgggatttt ttcagaaaga acttgaactt  
660  
agtgtgaaga agactagaga tctggtagtt cgtctcccaa ggctgctaac tggagtctg  
720  
gaaccctga aagaaaatat gaaggtttat cgtcttgaac ttgggtttta acataacgaa  
780  
attcaacata tgatcaccag aatcccaaag atgttaactg caaataaaat gaaacttacc  
840  
gagacgtttg attttgtgca caatgtgatg agcattcccc accacatcat tgtcaagttc  
900  
ccacaggtat ttaatacaag gctgtttaag gtcaaagaaa gacacttggt tcttacctat  
960  
ttaggaagag cacagtatga tccagcaaaa cctaactaca tctctttgga caaactagta  
1020  
tctattcctg atgaaatatt ttgtgaagag attgccaaag catcagtaca ggactttgaa  
1080  
aaattcttaa aaacgcttta gatttttatg tatgttaaaa tgcagtattg taaagtgaat  
1140  
atatatatga ataatgaat atatttttaa aaaaaaa  
1177

&lt;210&gt; 5270

&lt;211&gt; 327

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

4440

&lt;400&gt; 5270

Met Asn Glu Gln Ser Gln Lys Thr Gln Asn Ile Ser Ser Phe Asp Ser  
1 5 10 15  
Glu Leu Phe Leu Glu Glu Leu Asp Glu Leu Pro Pro Leu Ser Pro Met  
20 25 30  
Gln Pro Ile Ser Glu Glu Glu Ala Ile Gln Ile Ile Ala Asp Pro Pro  
35 40 45  
Leu Pro Pro Ala Ser Phe Thr Leu Arg Asp Tyr Val Asp His Ser Glu  
50 55 60  
Thr Leu Gln Lys Leu Val Leu Leu Gly Val Asp Leu Ser Lys Ile Glu  
65 70 75 80  
Lys His Pro Glu Ala Ala Asn Leu Leu Arg Leu Asp Phe Glu Lys  
85 90 95  
Asp Ile Lys Gln Met Leu Leu Phe Leu Lys Asp Val Gly Ile Glu Asp  
100 105 110  
Asn Gln Leu Gly Ala Phe Leu Thr Lys Asn His Ala Ile Phe Ser Glu  
115 120 125  
Asp Leu Glu Asn Leu Lys Thr Arg Val Ala Tyr Leu His Ser Lys Asn  
130 135 140  
Phe Ser Lys Ala Asp Val Ala Gln Met Val Arg Lys Ala Pro Phe Leu  
145 150 155 160  
Leu Asn Phe Ser Val Glu Arg Leu Asp Asn Arg Leu Gly Phe Phe Gln  
165 170 175  
Lys Glu Leu Glu Leu Ser Val Lys Lys Thr Arg Asp Leu Val Val Arg  
180 185 190  
Leu Pro Arg Leu Leu Thr Gly Ser Leu Glu Pro Val Lys Glu Asn Met  
195 200 205  
Lys Val Tyr Arg Leu Glu Leu Gly Phe Lys His Asn Glu Ile Gln His  
210 215 220  
Met Ile Thr Arg Ile Pro Lys Met Leu Thr Ala Asn Lys Met Lys Leu  
225 230 235 240  
Thr Glu Thr Phe Asp Phe Val His Asn Val Met Ser Ile Pro His His  
245 250 255  
Ile Ile Val Lys Phe Pro Gln Val Phe Asn Thr Arg Leu Phe Lys Val  
260 265 270  
Lys Glu Arg His Leu Phe Leu Thr Tyr Leu Gly Arg Ala Gln Tyr Asp  
275 280 285  
Pro Ala Lys Pro Asn Tyr Ile Ser Leu Asp Lys Leu Val Ser Ile Pro  
290 295 300  
Asp Glu Ile Phe Cys Glu Glu Ile Ala Lys Ala Ser Val Gln Asp Phe  
305 310 315 320  
Glu Lys Phe Leu Lys Thr Leu  
325

&lt;210&gt; 5271

&lt;211&gt; 1185

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5271

nagatctgcg gtctgggggc tgggtgaaag atggcgggccc tcactaccct gtttaagtac  
60  
atagatgaaa atcaggatcg ctacattaag cctgttcaac tgcagcagcc acagaggggtg  
120



agcctggaat gtggcaacgt tacgggagcc tcttctccct caaggacacc ttttcagaat  
180  
ccctcggttgcc ttcttgtcca caaacagaaa ctcgcaaaat ggggtggctat ccagagtgtg  
240  
tctgcgtggc cggagaagag aggcgaaatc aggaggatga tggagttgc tgctgcagat  
300  
gttaagcagt tgggggggctc tgtggaactg gtggatatcg gaaaacaaaa gctccctgat  
360  
ggctcggaga tcccgtccc tctattctg ctcggcaggc tgggctccga cccacagaag  
420  
aagaccgtgt gcatttacgg gcacctggat gtgcagcctg cagccctgga ggacggctgg  
480  
gacagcgagc ccttcaccct ggtggagcga gacggcaagc tgtatgggag aggttcgact  
540  
gatgataagg gcccggtggc cggctggata aacgccctgg aagcgtatca gaaaacaggc  
600  
caggagattc ctgtcaacgt ccgattctgc ctgcaaggca tggaggagtc aggctctgag  
660  
ggcctagacg agctgatttt tgcccggaaa gacacattct ttaaggatgt ggactatgtc  
720  
tgcatttctg acaattactg gctgggaaaag aagaagccct gcatcaccta cggcctcagg  
780  
ggcatttgct actttttcat cgagggtggag tgcagcaaca aagacctcca ttctgggggtg  
840  
tacggggggct cgggtgcatga ggccatgact gatctcattt tgctgatggg ctcttttggtg  
900  
gacaagaggg ggaacatcct gatccccggc attaacgagg ccgtggccgc cgtcacggaa  
960  
gaggagcaca agctgtacga cgacatcgac tttgacatag aggagtttgc caaggatgtg  
1020  
ggggcgcgaga tcctcctgca cagccacaag aaagacatcc tcatgcaccg atggcggtac  
1080  
ccgtctctgt cctccatgg catcgaaggc gccttctctg ggtctggggc caagaccgtg  
1140  
attccccaaa aggtggttgg caagttctcc atcaggctcg tgccg  
1185

&lt;210&gt; 5272

&lt;211&gt; 385

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5272

Met	Ala	Ala	Leu	Thr	Thr	Leu	Phe	Lys	Tyr	Ile	Asp	Glu	Asn	Gln	Asp
1			5					10						15	
Arg	Tyr	Ile	Lys	Pro	Val	Gln	Leu	Gln	Gln	Pro	Gln	Arg	Val	Ser	Leu
			20					25					30		
Glu	Cys	Gly	Asn	Val	Thr	Gly	Ala	Ser	Ser	Pro	Ser	Arg	Thr	Pro	Phe
		35				40						45			
Gln	Asn	Pro	Ser	Leu	Leu	Leu	Val	His	Lys	Gln	Lys	Leu	Ala	Lys	Trp
	50				55					60					
Val	Ala	Ile	Gln	Ser	Val	Ser	Ala	Trp	Pro	Glu	Lys	Arg	Gly	Glu	Ile
65				70				75						80	
Arg	Arg	Met	Met	Glu	Val	Ala	Ala	Ala	Asp	Val	Lys	Gln	Leu	Gly	Gly

85 90 95  
 Ser Val Glu Leu Val Asp Ile Gly Lys Gln Lys Leu Pro Asp Gly Ser  
 100 105 110  
 Glu Ile Pro Leu Pro Pro Ile Leu Leu Gly Arg Leu Gly Ser Asp Pro  
 115 120 125  
 Gln Lys Lys Thr Val Cys Ile Tyr Gly His Leu Asp Val Gln Pro Ala  
 130 135 140  
 Ala Leu Glu Asp Gly Trp Asp Ser Glu Pro Phe Thr Leu Val Glu Arg  
 145 150 155 160  
 Asp Gly Lys Leu Tyr Gly Arg Gly Ser Thr Asp Asp Lys Gly Pro Val  
 165 170 175  
 Ala Gly Trp Ile Asn Ala Leu Glu Ala Tyr Gln Lys Thr Gly Gln Glu  
 180 185 190  
 Ile Pro Val Asn Val Arg Phe Cys Leu Glu Gly Met Glu Glu Ser Gly  
 195 200 205  
 Ser Glu Gly Leu Asp Glu Leu Ile Phe Ala Arg Lys Asp Thr Phe Phe  
 210 215 220  
 Lys Asp Val Asp Tyr Val Cys Ile Ser Asp Asn Tyr Trp Leu Gly Lys  
 225 230 235 240  
 Lys Lys Pro Cys Ile Thr Tyr Gly Leu Arg Gly Ile Cys Tyr Phe Phe  
 245 250 255  
 Ile Glu Val Glu Cys Ser Asn Lys Asp Leu His Ser Gly Val Tyr Gly  
 260 265 270  
 Gly Ser Val His Glu Ala Met Thr Asp Leu Ile Leu Leu Met Gly Ser  
 275 280 285  
 Leu Val Asp Lys Arg Gly Asn Ile Leu Ile Pro Gly Ile Asn Glu Ala  
 290 295 300  
 Val Ala Ala Val Thr Glu Glu Glu His Lys Leu Tyr Asp Asp Ile Asp  
 305 310 315 320  
 Phe Asp Ile Glu Glu Phe Ala Lys Asp Val Gly Ala Gln Ile Leu Leu  
 325 330 335  
 His Ser His Lys Lys Asp Ile Leu Met His Arg Trp Arg Tyr Pro Ser  
 340 345 350  
 Leu Ser Leu His Gly Ile Glu Gly Ala Phe Ser Gly Ser Gly Ala Lys  
 355 360 365  
 Thr Val Ile Pro Lys Lys Val Val Gly Lys Phe Ser Ile Arg Leu Val  
 370 375 380  
 Pro  
 385

&lt;210&gt; 5273

&lt;211&gt; 4580

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5273

ccatggggta ggcgataact agcgttgggg agcggctata accttcccgg cagtggacga  
 60  
 gcacccggcc tgtaatccca gctacttggg aggctgaggc gggaggctga ggcaggagaa  
 120  
 tcgcttgaac ccgggaggtg gaggttgagg tgagccaaga tcgcgccatt gctcttcagc  
 180  
 ctgggcaaca agagtgaac tccatctttc ttttgagcca aagcctgggc aatgaagtcg  
 240

gcagcccttt caaagtaagc gctgaggttg aactcctgtg tgcgttggc cttgatgccc  
300  
aggtatgtga tgccggagtc cttgtagaag ttggcattgg tgttgacgtg catgaaggac  
360  
ctgccctcag ccgcgttcag cacatgggtg atgcctagtt tctgcagctt ggggatgtcg  
420  
ggctcgttcg agctctcggg gcaggatctc aacgacctgc tctcggacgg cagcggctgc  
480  
tacagcctcc cgagccagcc ctgcaacgag gtcaccccg cggatctacgt gggcaacgcg  
540  
tctgtggctc aggacatccc caagctgcag aaactaggca tcacccatgt gctgaacgcg  
600  
gctgagggca ggtccttcat gcacgtcaac accaatgcca acttctacaa ggactccggc  
660  
atcacatacc tgggcatcaa ggccaacgac acacaggagt tcaacctcag cgcttacttt  
720  
gaaagggctg ccgacttcat tgaccaggct ttggctcaaa agaatggccg ggtgctcgtc  
780  
cactgccggg aaggttatag ccgctcccca acgctagtta tcgctacct catgatgcgg  
840  
cagaagatgg acgtcaagtc tgccctgagc atcgtgaggc agaaccgtga gatcggtccc  
900  
aacgatggct tcctggccca gctctgccag ctcaatgaca gactagccaa ggaggggaag  
960  
ttgaaaccct agggcacccc caccgcctct gctcgagagg tccgtggggg aggccgtggg  
1020  
caaaggtgtc ccgagctgcc atgttttagga aacacactgt accctgctcc cagcatcaca  
1080  
aggcacttgt ctacaagtgt gtcccaacac agtcctgggc cactttcccc accctgggga  
1140  
gcacataaag aagcttgcca agggggggcgt ccttgctccc cagttgtcct gtttctgtaa  
1200  
cttatgatgt cttttccctg agatgggggg tcagaggggg aaggcctgtg gcctgcatgc  
1260  
ttcccgatgg cccacggcag gaggtgtgtg gaagtgtgta gcctaagatg ctacagagg  
1320  
tccctcatga cctcccttcc ccaactcccc aatcctctct tgagtgtgga cctcaacacc  
1380  
ttgagcccta gtaaaggaac tatgcaaatg caggccactc tccccaccac gtctgtgccc  
1440  
cgcactgtcc ccacagcctt ccacaccctg tgcataggca gccctctcac gtcttgaggt  
1500  
ccgaagctgg ggtgggggtg tccgtcagtt attagtggat ggagattccc acagcaaggc  
1560  
tgcatttgaa tgatttcctt aggatgaatg gtccctacac aaagaggcct tgtgggcaaa  
1620  
cctggagaac cctcctaaat ccatagagtt ttcaaatgt gaatctttgg aagccttgag  
1680  
ttcagaatct gctgctctgg aatatttccc ttgatctta tctcagtcac ttcgtttttg  
1740  
agaagagtga tgccttgggc atgctttttt tttttctttt ttagaaaaca gggagttgaa  
1800  
gtccaaccta tttaaaaacc ccaccatttg gagaattaca agggttttgt cctgaattgt  
1860

agtgttggca agcecaagcc actcgtgcta actgcttttt gtctcggttg ctattccaag  
1920  
aacagaagga ggaagtggc caattacagc gtgtgtgcat ggatgtgtgt ggggggcgtg  
1980  
cctctcagaa acgcggccag aagacaagca ggggaagtga aggtcccagg cacacaccct  
2040  
gcccattgca ggtggctctt acagctctct ggtgccagca cgggatccct gaagtgactc  
2100  
agccaggcag acatgagaca tggcggagtg tccaaatgga tcctttattg gtggtagagc  
2160  
aaaaaaaccc aaacacgata aacctttcaa aagactttct aaggatgata ttggaatgca  
2220  
ccagccctca catgtgtatg cacatttgcc agaataaag agttttgttt taaatacagt  
2280  
cttgtagga ttttacgtta ttgttattat ggaaagtgat tgtgatgcta tttatcttca  
2340  
gggtcactct gggcaaagag aaggtcctca gccatgcccc cagcaccttg cacatagggtg  
2400  
tctgataaaa gtttaagaaa ttaaactt tttgagcacc aaatatatat agggcattgt  
2460  
tctgggtgggt gtgtcacgct cccagaagac tgaatttatg gtaggatcac tcgcaaggcc  
2520  
ttgtgaagga gtcttaccta aaacaaaaga aatatcaggg acttttggtg actatttaca  
2580  
actcagtttt acatttaaatt tcaggcagtg ttaatatgcc aaggtaggga atgtgccttt  
2640  
ttcagagttg gccaggagct cctggctggg acacggagag gcagggtgtg gcgtaaggcc  
2700  
tactccccg ctgtgaaggc ctctgatcac acagaagcag ccctgcccag cctggtcatt  
2760  
tgctgtccgc ttttctctgt gaccacagca gccctgaaca accagtatgt gtcttcttct  
2820  
ccagatagtg aaaaagggtg ccagataaac ccacctaagt gaaatggcca tcctctaaac  
2880  
tgggtacctc actgcacagc ttctaggtag ccttccaact taatctaact tgagcctcac  
2940  
agtaaccctg taaagttagt agagcttggt cttgtattgt gacctttttt aaaaaaagg  
3000  
aactgagggt cagaatgatt aagggcctgg ccccagggt tgtccagctc cataagggtg  
3060  
agctgggcaa gattttgggt ttgctgctcc ctgaagctgg attctttcat acgatactct  
3120  
ttctcaagaa gggggctccc tgggatctcc aggtgtactg cacttaccct caatccagcc  
3180  
ccggagaagc aagtgaaaag ggtgggtccc tcataggcta gaatgtgcag ctctttctcc  
3240  
aggtgggatg tagcaccca aagtagagct ttctgctctg ctctggaaa aggctaggga  
3300  
gctggggctg gggctcccct cccatgacca ggcagtggc accccatggg acaggcacag  
3360  
ctacttacgc gaacacagca ggttggtgtg gctggctaac taggacctct cgaaagtctc  
3420  
tgtgggggca tgaggagaa aaggccattg ggagaattac tgcctttact ttgggactac  
3480

ttttatgctg ataacttggg atttcttgat agtccttcac ccttgaaacc ccgtatttac  
 3540  
 ttaacaagat ttagctctta gttcttcaag taaaattaaa gtctcttggtg taagagccaa  
 3600  
 cacatgcccga gctgcggatg ggagctgttc ctggacagcc ttctactgcc tgggaagtga  
 3660  
 tgggaacagga actcaggggtg cccttaccac cccccagac ctgttccctt tctttgactg  
 3720  
 acagagcacc atccaggcaa aattagagcg ccaaattggtt ttcttctcaa tcttaaagca  
 3780  
 gtataccttt ccacaggctc gtctgtgtcc ctgccactct gagttatcca gaaaccacca  
 3840  
 cctacaaatg aggggactca tctagaagac ctctaaggctc cccttttggc tctgaggggt  
 3900  
 ctctaataat cccacttgg aattcagcac cgcaaggaaa ttatgggtat gtgagccata  
 3960  
 atatgatggc cagcaggtgg cgctgccttc caccatggt gatggatggt ttggaaaggg  
 4020  
 aatgttggtg ccttttgtgc cacaagttaa gatgctactg ttttaaagga aaaaaaaaaa  
 4080  
 aaaaaagtac tgatcttcaa tatgaagaca tgagcttttc tcgcaggaaa ttttcttttt  
 4140  
 cacagaactg gtgtcaggaa tcaactgaagg gctaaccgtg atagtccttg caagtaagtc  
 4200  
 aaggttttat cctgattgga aatagaagac atttccggtt gagagaacag attcgttgga  
 4260  
 agcttaactt ttgttgctc ttaacgccac caaatttttag ggtaattga ttatgaaaga  
 4320  
 gtgaattttt ctggacagaa aaggagagc taccaaattg ttttttctt tttaaaagga  
 4380  
 agtttaatgt ccgttgtatc acaaatcagt gttaaaacac cagaacttta gccaaaataa  
 4440  
 atgtcttaca ttacaaaggt aaaaaaaaaa aaaaaaaaaa ccaaaaatt ttttataccg  
 4500  
 gaaatttgaa aaaaccccc atttcccccc aacagtgacc cggaacactc ctcattctat  
 4560  
 taattacacc attctcccat  
 4580

&lt;210&gt; 5274

&lt;211&gt; 185

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5274

Met	Ser	Gly	Ser	Phe	Glu	Leu	Ser	Val	Gln	Asp	Leu	Asn	Asp	Leu	Leu
1				5					10					15	
Ser	Asp	Gly	Ser	Gly	Cys	Tyr	Ser	Leu	Pro	Ser	Gln	Pro	Cys	Asn	Glu
			20					25					30		
Val	Thr	Pro	Arg	Ile	Tyr	Val	Gly	Asn	Ala	Ser	Val	Ala	Gln	Asp	Ile
			35				40					45			
Pro	Lys	Leu	Gln	Lys	Leu	Gly	Ile	Thr	His	Val	Leu	Asn	Ala	Ala	Glu
	50					55					60				
Gly	Arg	Ser	Phe	Met	His	Val	Asn	Thr	Asn	Ala	Asn	Phe	Tyr	Lys	Asp

65	70								75				80			
Ser	Gly	Ile	Thr	Tyr	Leu	Gly	Ile	Lys	Ala	Asn	Asp	Thr	Gln	Glu	Phe	
				85					90					95		
Asn	Leu	Ser	Ala	Tyr	Phe	Glu	Arg	Ala	Ala	Asp	Phe	Ile	Asp	Gln	Ala	
				100					105					110		
Leu	Ala	Gln	Lys	Asn	Gly	Arg	Val	Leu	Val	His	Cys	Arg	Glu	Gly	Tyr	
				115					120					125		
Ser	Arg	Ser	Pro	Thr	Leu	Val	Ile	Ala	Tyr	Leu	Met	Met	Arg	Gln	Lys	
				130					135					140		
Met	Asp	Val	Lys	Ser	Ala	Leu	Ser	Ile	Val	Arg	Gln	Asn	Arg	Glu	Ile	
				145					150					155		
Gly	Pro	Asn	Asp	Gly	Phe	Leu	Ala	Gln	Leu	Cys	Gln	Leu	Asn	Asp	Arg	
				165					170					175		
Leu	Ala	Lys	Glu	Gly	Lys	Leu	Lys	Pro								
				180					185							

```
<210> 5275
<211> 810
<212> DNA
<213> Homo sapiens
```

```

<400> 5275
nntctcgctc aggctcggtt ttaccccgga gtctattcga agggggctgc tacgtcagcg
60
cgtctcagcg taagacggcg ctattccgct gtaacagctt ccggcgggtc ctggatgttg
120
atgtcctgca tctaacgcgg tgtgaccccc gaagccgagc gagctccgga ggaatttcag
180
tatctgctac ggtaacttca tcagcccgcc aagatggcga tgcaagcggc caagagggcg
240
aacattcgac ttccacctga agtaaatcgg atattgtata taagaaattt gccatacaaa
300
atcacagctg aagaaatgta tgatatattt gggaaatatg gacctattcg tcaaatcaga
360
gtgggggaaca cacctgaaac tagaggaaca gcttatgtgg tctatgagga catctttgat
420
gccagaatg catgtgatca cctatcggga ttcaatgttt gtaacagata ccttgtggtt
480
ttgtactata atgccaacag ggcatttcag aagatggaca caaagaagaa ggaggaacag
540
ttgaagcttc tcaaggagaa atatggcatc aacacagatc caccaaaata aatgttttct
600
acattttcat ttggactaaa tcccacgaat gacaactacc accttttttt cctttttaat
660
taatactaaa tattgtgatt tcttatttga gggttcaaaat gacctgcttg aaactttgat
720
acatatggga atacattatg ttaataaact tgtagctttt tgtgaaacaa aaaaaaaaaag
780
tcgacgcggc cggcaattta gtagtagtag
810

```

```
<210> 5276
<211> 125.
<212> PRT
```

<213> Homo sapiens

<400> 5276

Met Ala Met Gln Ala Ala Lys Arg Ala Asn Ile Arg Leu Pro Pro Glu  
1 5 10 15  
Val Asn Arg Ile Leu Tyr Ile Arg Asn Leu Pro Tyr Lys Ile Thr Ala  
20 25 30  
Glu Glu Met Tyr Asp Ile Phe Gly Lys Tyr Gly Pro Ile Arg Gln Ile  
35 40 45  
Arg Val Gly Asn Thr Pro Glu Thr Arg Gly Thr Ala Tyr Val Val Tyr  
50 55 60  
Glu Asp Ile Phe Asp Ala Lys Asn Ala Cys Asp His Leu Ser Gly Phe  
65 70 75 80  
Asn Val Cys Asn Arg Tyr Leu Val Val Leu Tyr Tyr Asn Ala Asn Arg  
85 90 95  
Ala Phe Gln Lys Met Asp Thr Lys Lys Lys Glu Glu Gln Leu Lys Leu  
100 105 110  
Leu Lys Glu Lys Tyr Gly Ile Asn Thr Asp Pro Pro Lys  
115 120 125

<210> 5277

<211> 612

<212> DNA

<213> Homo sapiens

<400> 5277

atctacgact tcatggatga cccgaagccc cacaagaagc tgggcccgcg gccctggctg  
60  
gtggcgccca tcacggccac ggagctgctc atcgtggtga agtacgaccc ccacacgctc  
120  
accctgtccc tgcccttcta catctcccag tgctggaccc tcggctccgt cctggcgctc  
180  
acctggaccg tctggcgctt ctctctgcgg gacatcacat tgaggtacaa ggagaccg  
240  
tggcagaagt ggcagaacaa ggatgaccag ggcagcaccg tcggcaacgg ggaccagcac  
300  
ccactggggc tggacgaaga cctgctgggg cctgggggtgg ccgagggcga gggagcacca  
360  
actccaaact gacctgggcc gtggctgcct cgtgagcctc ccagagccca ggcctccgtg  
420  
gcctcctcct gtgtgagtcc caccaggagc cacgtgcccg gccttgccct caagggtttt  
480  
tgcttttctc ctgtgcacct ggcgaggctg aaggcgaggg gtggaggagg ccccagcaca  
540  
gcctcatctc catgtgtaca cgtgtgtacg tgtgtatgcg tgtgtgtacg tgtgtatgcg  
600  
tgtgtgtacg tg  
612

<210> 5278

<211> 123

<212> PRT

<213> Homo sapiens

<400> 5278  
 Ile Tyr Asp Phe Met Asp Asp Pro Lys Pro His Lys Lys Leu Gly Pro  
 1 5 10 15  
 Gln Ala Trp Leu Val Ala Ala Ile Thr Ala Thr Glu Leu Leu Ile Val  
 20 25 30  
 Val Lys Tyr Asp Pro His Thr Leu Thr Leu Ser Leu Pro Phe Tyr Ile  
 35 40 45  
 Ser Gln Cys Trp Thr Leu Gly Ser Val Leu Ala Leu Thr Trp Thr Val  
 50 55 60  
 Trp Arg Phe Phe Leu Arg Asp Ile Thr Leu Arg Tyr Lys Glu Thr Arg  
 65 70 75 80  
 Trp Gln Lys Trp Gln Asn Lys Asp Asp Gln Gly Ser Thr Val Gly Asn  
 85 90 95  
 Gly Asp Gln His Pro Leu Gly Leu Asp Glu Asp Leu Leu Gly Pro Gly  
 100 105 110  
 Val Ala Glu Gly Glu Gly Ala Pro Thr Pro Asn  
 115 120

<210> 5279  
 <211> 1225  
 <212> DNA  
 <213> Homo sapiens

<400> 5279  
 atcaatggag cagaggagaa aattctagaa gatttccgaa aaaccacag ccctgatgcc  
 60  
 cctgactttc agctgcaggc catgattcag gcagcaggaa agcttgtgtt gattgataaa  
 120  
 ctactcccta agctgattgc aggtggccac aaagtactca tcttctccca gatggtgogc  
 180  
 tgccctcgaca tcctagaaga ttatttaatc cagagaagat acacctatga acgtattgat  
 240  
 gggcgagtac ggggaaacct gcgccaggct gccatcgacc gcttcagcaa gcctgactca  
 300  
 gaccgctttg tcttcttact gtgcaccaga gcgggaggcc tggggatcaa tctcacagct  
 360  
 gctgatacct gcatcatatt tgattctgac tggaaaccac aaaatgactt gcaggctcag  
 420  
 gcccgatgtc accgcatagg ccagagcaaa gctgtgaagg tgtatcgect catcactcga  
 480  
 aattcctacg agcgcgagat gtttgacaag gccagcctaa agctggggct ggacaaggct  
 540  
 gttctttcaga catcaaccga aagggcgga ccaatgggta cagcactctc aaaaatggag  
 600  
 gtggaggacc tactccgaa aggtgcttat ggagccttaa tggatgaaga agatgaaggc  
 660  
 tccaagttct gtgaagaaga catagaccag attctgcaga ggcgaacgca caccatcacc  
 720  
 atccagtctg aggggaaagg gtccactttt gccaggcta gctttgtggc ttcaggaaac  
 780  
 agaacagata tttccttaga tgatcctaac ttttggcaga aatgggctaa aatagctgaa  
 840  
 ctagacactg aagcaaagaa tgaaaaggaa agcttagtga tcgaccgacc tcgctgaga  
 900



aagcagacca aacactacaa ctcgttttgag gaagacgagc tcatggagtt ttcagagtta  
 960  
 gacagcgact cagacgaaag gcccacgaga tccaggcgcc tcaatgacaa agccaggcgc  
 1020  
 tacctccgag cggagtgctt ccgggtagag aagaacctgc tcatcttttg ctggggccgg  
 1080  
 tggaaggaca tcctgactca tggccgattc aagtggcatc tgaacgagaa ggacatggag  
 1140  
 atgatttgcc gtgccctcct ggtgtactgt gtcaagcatt ataaggggga cgagaagatc  
 1200  
 aagagtttca tttgggaact gatca  
 1225

<210> 5280

<211> 408

<212> PRT

<213> Homo sapiens

<400> 5280

Ile	Asn	Gly	Ala	Glu	Glu	Lys	Ile	Leu	Glu	Asp	Phe	Arg	Lys	Thr	His
1				5					10					15	
Ser	Pro	Asp	Ala	Pro	Asp	Phe	Gln	Leu	Gln	Ala	Met	Ile	Gln	Ala	Ala
			20					25					30		
Gly	Lys	Leu	Val	Leu	Ile	Asp	Lys	Leu	Leu	Pro	Lys	Leu	Ile	Ala	Gly
			35				40					45			
Gly	His	Lys	Val	Leu	Ile	Phe	Ser	Gln	Met	Val	Arg	Cys	Leu	Asp	Ile
			50			55				60					
Leu	Glu	Asp	Tyr	Leu	Ile	Gln	Arg	Arg	Tyr	Thr	Tyr	Glu	Arg	Ile	Asp
65					70				75					80	
Gly	Arg	Val	Arg	Gly	Asn	Leu	Arg	Gln	Ala	Ala	Ile	Asp	Arg	Phe	Ser
				85				90						95	
Lys	Pro	Asp	Ser	Asp	Arg	Phe	Val	Phe	Leu	Leu	Cys	Thr	Arg	Ala	Gly
			100					105						110	
Gly	Leu	Gly	Ile	Asn	Leu	Thr	Ala	Ala	Asp	Thr	Cys	Ile	Ile	Phe	Asp
			115				120					125			
Ser	Asp	Trp	Asn	Pro	Gln	Asn	Asp	Leu	Gln	Ala	Gln	Ala	Arg	Cys	His
			130			135				140					
Arg	Ile	Gly	Gln	Ser	Lys	Ala	Val	Lys	Val	Tyr	Arg	Leu	Ile	Thr	Arg
145					150					155				160	
Asn	Ser	Tyr	Glu	Arg	Glu	Met	Phe	Asp	Lys	Ala	Ser	Leu	Lys	Leu	Gly
			165					170						175	
Leu	Asp	Lys	Ala	Val	Leu	Gln	Thr	Ser	Thr	Glu	Arg	Ala	Ala	Pro	Met
			180				185						190		
Gly	Thr	Ala	Leu	Ser	Lys	Met	Glu	Val	Glu	Asp	Leu	Leu	Arg	Lys	Gly
			195			200					205				
Ala	Tyr	Gly	Ala	Leu	Met	Asp	Glu	Glu	Asp	Glu	Gly	Ser	Lys	Phe	Cys
			210			215					220				
Glu	Glu	Asp	Ile	Asp	Gln	Ile	Leu	Gln	Arg	Arg	Thr	His	Thr	Ile	Thr
225					230					235				240	
Ile	Gln	Ser	Glu	Gly	Lys	Gly	Ser	Thr	Phe	Ala	Lys	Ala	Ser	Phe	Val
			245					250						255	
Ala	Ser	Gly	Asn	Arg	Thr	Asp	Ile	Ser	Leu	Asp	Asp	Pro	Asn	Phe	Trp
			260					265					270		
Gln	Lys	Trp	Ala	Lys	Ile	Ala	Glu	Leu	Asp	Thr	Glu	Ala	Lys	Asn	Glu

```

      275      280      285
Lys Glu Ser Leu Val Ile Asp Arg Pro Arg Val Arg Lys Gln Thr Lys
      290      295      300
His Tyr Asn Ser Phe Glu Glu Asp Glu Leu Met Glu Phe Ser Glu Leu
305      310      315      320
Asp Ser Asp Ser Asp Glu Arg Pro Thr Arg Ser Arg Arg Leu Asn Asp
      325      330      335
Lys Ala Arg Arg Tyr Leu Arg Ala Glu Cys Phe Arg Val Glu Lys Asn
      340      345      350
Leu Leu Ile Phe Gly Trp Gly Arg Trp Lys Asp Ile Leu Thr His Gly
      355      360      365
Arg Phe Lys Trp His Leu Asn Glu Lys Asp Met Glu Met Ile Cys Arg
      370      375      380
Ala Leu Leu Val Tyr Cys Val Lys His Tyr Lys Gly Asp Glu Lys Ile
385      390      395      400
Lys Ser Phe Ile Trp Glu Leu Ile
      405

```

<210> 5281  
 <211> 336  
 <212> DNA  
 <213> Homo sapiens

```

<400> 5281
tgatcaacaa tacttttcag agtctcttgg ggtgtgatga gttaagcttc ctactggatg
60
aaatgcaaac cgcccaaat aaataccagg agcttaagaa tatttgcagc tatagggctc
120
aggcattcct ggtactcaca ggtctgacag ccacagttgg agacacagct atttcttcag
180
aagagaaaac acaacgcatg tcattaatga gacatcacat gggacaatca ttgtccaaag
240
aagttgcaca tgtctcacc aaacctggag cagatcacga ttgggaaaac ctagagaaaag
300
acttgagatt gctcattaat ggggattatg aagaag
336

```

<210> 5282  
 <211> 91  
 <212> PRT  
 <213> Homo sapiens

```

<400> 5282
Met Gln Thr Ala Gln Asn Lys Tyr Gln Glu Leu Lys Asn Ile Cys Ser
1      5      10      15
Tyr Arg Ala Gln Ala Phe Leu Val Leu Thr Gly Leu Thr Ala Thr Val
      20      25      30
Gly Asp Thr Ala Ile Ser Ser Glu Glu Lys Thr Gln Arg Met Ser Leu
      35      40      45
Met Arg His His Met Gly Gln Ser Leu Ser Lys Glu Val Ala His Val
      50      55      60
Leu Thr Lys Pro Gly Ala Asp His Asp Trp Glu Asn Leu Glu Lys Asp
65      70      75      80
Leu Arg Leu Leu Ile Asn Gly Asp Tyr Glu Glu

```

85

90

&lt;210&gt; 5283

&lt;211&gt; 1989

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5283

naggccgctt gggcgactt gccgggtcac cttgtcccg aggagaaatg gcttcctga  
60  
ggcaagtgtg acctacattc ccagcccacc agcctgacgc ccagccaggg agagagtacc  
120  
atggatggca tcattgaaca gaagagcatg ctggtgcaca gtaaaatcag tgatgctggc  
180  
aagaggaatg gtttaattaa caccagaaac ttgatggccg agagcagaga tggctctggtg  
240  
tctgtttacc cagcgcccca gtaccagagc caccgggtgg gggccagcac agtgccggcc  
300  
agcctggaca gcagcaggag tgagccgatg cagcagctgc tggaccccaa caccctgcag  
360  
cagtcagtgg agtcccgtc cgggccaac atcatcctct attcagaggg cgtgctgcgc  
420  
tcctgggggg acggtgtggc cgccgactgc tgcgagacca ccttcacga ggaccggtcg  
480  
cccaccaaag acagcctcga gtaccgggat gggagttca ttgacctctc agctgatgac  
540  
ataaaaatcc acaccctgtc ctacgatgtg gaggaggagg aggagttcca ggagctggag  
600  
agcgactact caagcgacac agagagtgtg gacaatttcc tcatgatgcc ccgcgggac  
660  
cacctgggcc tcagtgtctt ctccatgtct tgetgttctt ggctctggg catcgagcc  
720  
ttctacttgt cccatgagac caacaaagcc gtggccaagg gggacttgca ccaggccagc  
780  
accagctccc ggcgggccct attcctggca gtgctgtcca tcaccattgg gactggcgctc  
840  
tatgtgggcg tggccgtggc cctcatcgcc tacctctcca agaacaacca cctgtgagct  
900  
tcctgcgaat ggagggggag caccggggc caggtctgtg tggacgtgga ggaagcaggc  
960  
ataccgcatg atgctgtaca gtacaaatga ttgccaaatg atgccacgaa gccctgggat  
1020  
ttctaccca tggatttatt ttgtttttat cctttaattt catgttcaca gcactgtgta  
1080  
gagcaccaga cagacgggca ctgctaatac ttccaaagga aagctccaaa gatcccagcc  
1140  
cgcaaggctg tctctggatg gattctggtg gatgaatggc aacgcggctc tctgcagcct  
1200  
gccagtgcc agagtggcac cgcattagca atatacaaac agtccaaaaa agtgtttatt  
1260  
ttttatggaa tacggtgcaa taggcagagg acaagggaca catcactctt ctgtctgtgg  
1320  
ccctgctgga gtcctttgtg ccccccggag tccacacgcc ttccctgcaa gacgagaatg  
1380

4452

gggctgggaa gaaagaggca acaccacggc tggcaggagc cccgctgcac tgctctgcag  
 1440  
 acccattggc ctgaccctga gaagcagagc cagcaaagcc cgggacctgc ccctctttct  
 1500  
 ttcccttcac accaccccag cctcaggatg tcaagccacc tccggaacgt gtctacactc  
 1560  
 cacagctacc ccgcagcaat acgcactctt gggacctcgc tgatctagga tggggaggca  
 1620  
 ggccaccgcc cctcccaaga ctctcaaga aagagccccg cggttgctcc ggaaactcga  
 1680  
 ggactgcag ctatgggcac tgcctcagcc taaagacaca ggggcgcctc ccaatcacgc  
 1740  
 cgctggcgga tgctacccc gtcataagca gaaactagt atcctggaaa tgagatgggc  
 1800  
 cttactctgt cgactaaatg aatagctatt ttcttgcat tttttaagt gcaactcttg  
 1860  
 cttcatgctg cttaagttac cagatgaatg ctgagaaata agtaatcaca gacattttta  
 1920  
 taccatttca ttgctgtttt acgagtgttc attacttaac aaaaaattat cttttagctt  
 1980  
 tttcgctta  
 1989

&lt;210&gt; 5284

&lt;211&gt; 258

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5284

Met	Asp	Gly	Ile	Ile	Glu	Gln	Lys	Ser	Met	Leu	Val	His	Ser	Lys	Ile
1				5					10					15	
Ser	Asp	Ala	Gly	Lys	Arg	Asn	Gly	Leu	Ile	Asn	Thr	Arg	Asn	Leu	Met
			20					25					30		
Ala	Glu	Ser	Arg	Asp	Gly	Leu	Val	Ser	Val	Tyr	Pro	Ala	Pro	Gln	Tyr
		35				40					45				
Gln	Ser	His	Arg	Val	Gly	Ala	Ser	Thr	Val	Pro	Ala	Ser	Leu	Asp	Ser
	50				55				60						
Ser	Arg	Ser	Glu	Pro	Met	Gln	Gln	Leu	Leu	Asp	Pro	Asn	Thr	Leu	Gln
65				70				75						80	
Gln	Ser	Val	Glu	Ser	Arg	Tyr	Arg	Pro	Asn	Ile	Ile	Leu	Tyr	Ser	Glu
			85					90					95		
Gly	Val	Leu	Arg	Ser	Trp	Gly	Asp	Gly	Val	Ala	Ala	Asp	Cys	Cys	Glu
			100					105					110		
Thr	Thr	Phe	Ile	Glu	Asp	Arg	Ser	Pro	Thr	Lys	Asp	Ser	Leu	Glu	Tyr
		115				120						125			
Pro	Asp	Gly	Lys	Phe	Ile	Asp	Leu	Ser	Ala	Asp	Asp	Ile	Lys	Ile	His
	130					135					140				
Thr	Leu	Ser	Tyr	Asp	Val	Glu	Glu	Glu	Glu	Glu	Phe	Gln	Glu	Leu	Glu
145				150				155						160	
Ser	Asp	Tyr	Ser	Ser	Asp	Thr	Glu	Ser	Glu	Asp	Asn	Phe	Leu	Met	Met
			165					170					175		
Pro	Pro	Arg	Asp	His	Leu	Gly	Leu	Ser	Val	Phe	Ser	Met	Leu	Cys	Cys
		180					185						190		
Phe	Trp	Pro	Leu	Gly	Ile	Ala	Ala	Phe	Tyr	Leu	Ser	His	Glu	Thr	Asn

	195		200		205										
Lys	Ala	Val	Ala	Lys	Gly	Asp	Leu	His	Gln	Ala	Ser	Thr	Ser	Ser	Arg
	210				215					220					
Arg	Ala	Leu	Phe	Leu	Ala	Val	Leu	Ser	Ile	Thr	Ile	Gly	Thr	Gly	Val
225				230					235					240	
Tyr	Val	Gly	Val	Ala	Val	Ala	Leu	Ile	Ala	Tyr	Leu	Ser	Lys	Asn	Asn
			245					250						255	
His	Leu														

<210> 5285  
 <211> 2155  
 <212> DNA  
 <213> Homo sapiens

<400> 5285  
 nnacgcgtgc agcaaagaat ggaggagtcg gaacccgaac ggaagcgggc tcgcaccgac  
 60  
 gaggtgcctg ccggaggaag ccgctccgag gcggaagatg aggacgacga ggactacgtg  
 120  
 ccctatgtgc cgttacggca gcgccggcag ctactgctcc agaagctgct gcagcgaaga  
 180  
 cgcaagggag ctgcggagga agagcagcag gacagcggta gtgaaccccg gggagatgag  
 240  
 gacgacatcc cgtaggccc tcagtccaac gtcagcctcc tggatcagca ccagcacctt  
 300  
 aaagagaagg ctgaagcgcg caaagagtct gccaggaga agcagctgaa ggaagaagag  
 360  
 aagatcctgg agagtgttgc cgagggccga gcattgatgt cagtgaagga gatggctaag  
 420  
 ggcattacgt atgatgacct catcaaaacc agctggactc caccocgtta tgttctgagc  
 480  
 atgtctgaag agcgacatga gcgcgtgcgg aagaaatacc acatcctggt ggaggagac  
 540  
 ggtatccac caccatcaa gagcttcaag gaaatgaagt ttctgcagc catcctgaga  
 600  
 ggcctgaaga agaaaggcat tcaccacca acaccattc agatccaggg catccccacc  
 660  
 attctatctg gccgtgacat gataggcatc gctttcacgg gttcaggcaa gacactggtg  
 720  
 ttcacgttgc ccgtcatcat gttctgcctg gaacaagaga agaggttacc cttctcaaag  
 780  
 cgcgaggggc cctatggact catcatctgc ccctcgcggg agctggcccg gcagacccat  
 840  
 ggcacccctg agtactactg ccgcctgctg caggaggaca gtcaccact cctgcgctgc  
 900  
 gccctctgca ttgggggcat gtccgtgaaa gagcagatgg agaccatccg acacggtgta  
 960  
 cacatgatgg tggccacccc ggggcgcctc atggatttgc tgcagaagaa gatggtcagc  
 1020  
 ctagacatct gtcgctacct ggcctggac gaggtgacc gcatgatcga catgggcttc  
 1080  
 gaggtgaca tccgtaccat cttctcctac ttcaagggcc agcgacagac cctgctcttc  
 1140

agtgccacca tgccgaagaa gattcagaac ttgctaaga gtgcccttgt aaagcctgtg  
1200  
accatcaatg tggggcgtgc tggggctgcc agcctggatg tcatccagga ggtagaatat  
1260  
gtgaaggagg aggccaagat ggtgtacctg ctcgagtgcc tgcagaagac acccccgcct  
1320  
gtactcatct ttgcagagaa gaaggcagac gtggacgcca tccacgagta cctgctgctc  
1380  
aaggggggttg aggccgtagc catccatggg ggcaaagacc aggaggaacg gactaaggcc  
1440  
atcgaggcat tccgggaggg caagaaggat gtcctagtag ccacagacgt tgcctccaag  
1500  
ggcctggact tccctgccat ccagcacgtc atcaattatg acatgccaga ggagattgag  
1560  
aactatgtac accggattgg ccgcaccggg cgctcgggaa acacaggcat cgccactacc  
1620  
ttcatcaaca aagcgtgtga tgagtcagtg ctgatggacc tcaaagcgct gctgctagaa  
1680  
gccaagcaga aggtgccgcc cgtgctgcag gtgctgcatt gcggggatga gtccatgctg  
1740  
gacattggag gagagcgagg ctgtgccttc tgcggggggcc tgggtcatcg gatcactgac  
1800  
tgccccaac tcgaggctat gcagaccaag caggtcagca acatcggtcg caaggactac  
1860  
ctggcccaca gctccatgga cttctgagcc gacagtcttc cttctctccc aagaggcctc  
1920  
agtccccaag actgccacca gtctacacat acagcagccc cctggacaga atcagcattt  
1980  
cagctcagct ggcctggaat gggccaggct ggtcctggct gcctgttccc tgtgctcttc  
2040  
agaattactg tttttgtttc cttttacccc agctgccatt aaagcccaaa cctctagccc  
2100  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa  
2155

&lt;210&gt; 5286

&lt;211&gt; 628

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5286

Xaa	Arg	Val	Gln	Gln	Arg	Met	Glu	Glu	Ser	Glu	Pro	Glu	Arg	Lys	Arg
1			5					10						15	
Ala	Arg	Thr	Asp	Glu	Val	Pro	Ala	Gly	Gly	Ser	Arg	Ser	Glu	Ala	Glu
			20					25					30		
Asp	Glu	Asp	Asp	Glu	Asp	Tyr	Val	Pro	Tyr	Val	Pro	Leu	Arg	Gln	Arg
			35				40					45			
Arg	Gln	Leu	Leu	Leu	Gln	Lys	Leu	Leu	Gln	Arg	Arg	Arg	Lys	Gly	Ala
			50			55				60					
Ala	Glu	Glu	Glu	Gln	Gln	Asp	Ser	Gly	Ser	Glu	Pro	Arg	Gly	Asp	Glu
65				70				75						80	
Asp	Asp	Ile	Pro	Leu	Gly	Pro	Gln	Ser	Asn	Val	Ser	Leu	Leu	Asp	Gln
			85				90						95		
His	Gln	His	Leu	Lys	Glu	Lys	Ala	Glu	Ala	Arg	Lys	Glu	Ser	Ala	Lys

			100					105					110			
Glu	Lys	Gln	Leu	Lys	Glu	Glu	Glu	Lys	Ile	Leu	Glu	Ser	Val	Ala	Glu	
		115					120					125				
Gly	Arg	Ala	Leu	Met	Ser	Val	Lys	Glu	Met	Ala	Lys	Gly	Ile	Thr	Tyr	
	130					135					140					
Asp	Asp	Pro	Ile	Lys	Thr	Ser	Trp	Thr	Pro	Pro	Arg	Tyr	Val	Leu	Ser	
145					150				155						160	
Met	Ser	Glu	Glu	Arg	His	Glu	Arg	Val	Arg	Lys	Lys	Tyr	His	Ile	Leu	
				165					170					175		
Val	Glu	Gly	Asp	Gly	Ile	Pro	Pro	Pro	Ile	Lys	Ser	Phe	Lys	Glu	Met	
			180					185					190			
Lys	Phe	Pro	Ala	Ala	Ile	Leu	Arg	Gly	Leu	Lys	Lys	Lys	Gly	Ile	His	
		195					200					205				
His	Pro	Thr	Pro	Ile	Gln	Ile	Gln	Gly	Ile	Pro	Thr	Ile	Leu	Ser	Gly	
	210					215					220					
Arg	Asp	Met	Ile	Gly	Ile	Ala	Phe	Thr	Gly	Ser	Gly	Lys	Thr	Leu	Val	
225					230					235					240	
Phe	Thr	Leu	Pro	Val	Ile	Met	Phe	Cys	Leu	Glu	Gln	Glu	Lys	Arg	Leu	
				245					250					255		
Pro	Phe	Ser	Lys	Arg	Glu	Gly	Pro	Tyr	Gly	Leu	Ile	Ile	Cys	Pro	Ser	
			260					265					270			
Arg	Glu	Leu	Ala	Arg	Gln	Thr	His	Gly	Ile	Leu	Glu	Tyr	Tyr	Cys	Arg	
	275						280					285				
Leu	Leu	Gln	Glu	Asp	Ser	Ser	Pro	Leu	Leu	Arg	Cys	Ala	Leu	Cys	Ile	
	290					295					300					
Gly	Gly	Met	Ser	Val	Lys	Glu	Gln	Met	Glu	Thr	Ile	Arg	His	Gly	Val	
305					310					315					320	
His	Met	Met	Val	Ala	Thr	Pro	Gly	Arg	Leu	Met	Asp	Leu	Leu	Gln	Lys	
				325					330					335		
Lys	Met	Val	Ser	Leu	Asp	Ile	Cys	Arg	Tyr	Leu	Ala	Leu	Asp	Glu	Ala	
			340					345					350			
Asp	Arg	Met	Ile	Asp	Met	Gly	Phe	Glu	Gly	Asp	Ile	Arg	Thr	Ile	Phe	
		355					360					365				
Ser	Tyr	Phe	Lys	Gly	Gln	Arg	Gln	Thr	Leu	Leu	Phe	Ser	Ala	Thr	Met	
	370					375					380					
Pro	Lys	Lys	Ile	Gln	Asn	Phe	Ala	Lys	Ser	Ala	Leu	Val	Lys	Pro	Val	
385					390					395					400	
Thr	Ile	Asn	Val	Gly	Arg	Ala	Gly	Ala	Ala	Ser	Leu	Asp	Val	Ile	Gln	
				405					410					415		
Glu	Val	Glu	Tyr	Val	Lys	Glu	Glu	Ala	Lys	Met	Val	Tyr	Leu	Leu	Glu	
			420					425					430			
Cys	Leu	Gln	Lys	Thr	Pro	Pro	Pro	Val	Leu	Ile	Phe	Ala	Glu	Lys	Lys	
		435					440					44				

530 535 540  
 Ala Cys Asp Glu Ser Val Leu Met Asp Leu Lys Ala Leu Leu Leu Glu  
 545 550 555 560  
 Ala Lys Gln Lys Val Pro Pro Val Leu Gln Val Leu His Cys Gly Asp  
 565 570 575  
 Glu Ser Met Leu Asp Ile Gly Gly Glu Arg Gly Cys Ala Phe Cys Gly  
 580 585 590  
 Gly Leu Gly His Arg Ile Thr Asp Cys Pro Lys Leu Glu Ala Met Gln  
 595 600 605  
 Thr Lys Gln Val Ser Asn Ile Gly Arg Lys Asp Tyr Leu Ala His Ser  
 610 615 620  
 Ser Met Asp Phe  
 625

<210> 5287  
 <211> 581  
 <212> DNA  
 <213> Homo sapiens

<400> 5287  
 nnagagcctc cagagcctcc gggctctgggc ggcgcttcgg ctcctcccga gccgcctgct  
 60  
 agccccgcgc cgcactccat cccacagggc tggggacggg ccaggtgcgg ctgtgtgggt  
 120  
 tcgggagcgg agttgcagaa tccaaggacc cttttgttc tttctccgca ctgctttatg  
 180  
 ggaggcatta tggcccccaa agacataatg acaaatactc atgctaaatc catcctcaat  
 240  
 tcaatgaact ccctcaggaa gagcaatacc ctctgtgatg tgacattgag agtagagcag  
 300  
 aaagacttcc ctgcccacgc gattgtgctg gctgcctgta gtgattactt ctgtgccatg  
 360  
 ttcactagtg agctctcaga gaaggggaaa ctttatgttg acatccaagg tttgactgcc  
 420  
 tctaccatgg aaattttatt ggactttgtg tacacagaaa cgggtacatgt gacagtggag  
 480  
 aatgtacaag aactgcttcc tgcagcctgt ctgcttcagt tgaaaggtgt gaaacaagcc  
 540  
 tgctgtgagt tcttagaaag tcagttggac ccttcacgcg t  
 581

<210> 5288  
 <211> 193  
 <212> PRT  
 <213> Homo sapiens

<400> 5288  
 Xaa Glu Pro Pro Glu Pro Pro Gly Leu Gly Gly Ala Ser Ala Pro Pro  
 1 5 10 15  
 Glu Pro Pro Ala Ser Pro Ala Pro His Ser Ile Pro Thr Gly Trp Gly  
 20 25 30  
 Arg Ala Arg Cys Gly Cys Val Gly Ser Gly Ala Glu Leu Gln Asn Pro  
 35 40 45  
 Arg Thr His Phe Val Leu Ser Pro His Cys Phe Met Gly Gly Ile Met



```

      50      55      60
Ala Pro Lys Asp Ile Met Thr Asn Thr His Ala Lys Ser Ile Leu Asn
65      70      75      80
Ser Met Asn Ser Leu Arg Lys Ser Asn Thr Leu Cys Asp Val Thr Leu
      85      90      95
Arg Val Glu Gln Lys Asp Phe Pro Ala His Arg Ile Val Leu Ala Ala
      100      105      110
Cys Ser Asp Tyr Phe Cys Ala Met Phe Thr Ser Glu Leu Ser Glu Lys
      115      120      125
Gly Lys Pro Tyr Val Asp Ile Gln Gly Leu Thr Ala Ser Thr Met Glu
      130      135      140
Ile Leu Leu Asp Phe Val Tyr Thr Glu Thr Val His Val Thr Val Glu
145      150      155      160
Asn Val Gln Glu Leu Leu Pro Ala Ala Cys Leu Leu Gln Leu Lys Gly
      165      170      175
Val Lys Gln Ala Cys Cys Glu Phe Leu Glu Ser Gln Leu Asp Pro Ser
      180      185      190
Arg

```

<210> 5289  
 <211> 361  
 <212> DNA  
 <213> Homo sapiens

<400> 5289  
 agatctctgt acacatgtta caccagacag ctatattcca tgccttgacag acctgtgcaa  
 60  
 agcactatgg gaagttatgc tcagctatta taggactatg gaatggcatg aaaagcatga  
 120  
 caatgaggat actgcttcag cttctgaagg ggaagtatat gataggggtcc tgaagaaact  
 180  
 tattttgatc ggggctacat taaaaaagaa attagaacat ggacttacac gaatatggca  
 240  
 ggatgttcag ctaaaagtaa aaacctactt gcttggaact gatttgtcta tattcaaata  
 300  
 tgatgatttc atctttgttt tggatataat cagcaggttg atgcaagttg gagaagaatt  
 360  
 c  
 361

<210> 5290  
 <211> 95  
 <212> PRT  
 <213> Homo sapiens

<400> 5290  
 Met Leu Ser Tyr Tyr Arg Thr Met Glu Trp His Glu Lys His Asp Asn  
 1 5 10 15  
 Glu Asp Thr Ala Ser Ala Ser Glu Gly Glu Val Tyr Asp Arg Val Leu  
 20 25 30  
 Lys Lys Leu Ile Leu Ile Gly Ala Thr Leu Lys Lys Lys Leu Glu His  
 35 40 45  
 Gly Leu Thr Arg Ile Trp Gln Asp Val Gln Leu Lys Val Lys Thr Tyr

50	55	60
Leu Leu Gly Thr Asp	Leu Ser Ile Phe Lys Tyr Asp Asp Phe Ile Phe	
65	70	75
Val Leu Asp Ile Ile Ser Arg Leu Met Gln Val Gly Glu Glu Phe		80
85	90	95

<210> 5291  
 <211> 767  
 <212> DNA  
 <213> Homo sapiens

<400> 5291  
 gtcgggaggt tctttgcgct gatagcaggg acgaagacca caccattgac caagaagatg  
 60  
 aagatggcca cgcagaagac tcccagcagg gcgtacatgc ccagctctag ctcaagtaca  
 120  
 tgctgagggg cagggaccat ctctctctcc tcttctctct cctccctggc tttgggtctcc  
 180  
 tccttctctg cctctctctc tgcccgetca aacttgcccc tcacacctgt gttgcccccg  
 240  
 acactgcttg ccacctgccg tttaccaccc atggtggctt ctgtggctgg tgggctccaa  
 300  
 gcagggctgg atggggagag caggggctgg agtggaggca gggggcagcc ccaccagggc  
 360  
 ggtgccagag gccaaaggca cacggtggcg gccccggcgn gcagggctcg ggcgggtgca  
 420  
 gagccacatg cagcggcagc ccctcggcgc ctgccccact caccaccacc ccgagctggg  
 480  
 caccctgctc ctcaagtggc aggatggcac caggctctct ggctgaaacg gacagtccca  
 540  
 gtcaggcggt cgtagagctc agctgggcca cagtgtgatc agagaaggac agccataggg  
 600  
 agagggccac ctctgtggg gcacacagac acaggcagag acatgagagg gcacgcacgc  
 660  
 atgcacagag aaaccactcc cacagagaca ggccacatgg aggagagacc agagagaaaa  
 720  
 cagagacaca ggcagataga caaaacacag ggagagaggg gacgcgt  
 767

<210> 5292  
 <211> 142  
 <212> PRT  
 <213> Homo sapiens

<400> 5292
Gly Ala Gly Thr Ile Ser Ser Ser Ser Ser Ser Ser Ser Leu Ala Leu
1 5 10 15
Val Ser Ser Phe Leu Ala Ser Ser Ser Ala Arg Ser Asn Leu Pro Leu
20 25 30
Thr Pro Val Leu Pro Pro Thr Leu Pro Ala Thr Cys Arg Leu Pro Pro
35 40 45
Met Val Ala Ser Val Ala Gly Gly Leu Gln Ala Gly Leu Asp Gly Glu
50 55 60
Ser Arg Gly Trp Ser Gly Gly Arg Gly Gln Pro His Pro Gly Gly Ala

65		70		75		80									
Arg	Gly	Gln	Arg	His	Thr	Val	Ala	Ala	Pro	Ala	Xaa	Arg	Ala	Arg	Ala
				85					90					95	
Gly	Ala	Glu	Pro	His	Ala	Ala	Ala	Ala	Pro	Arg	Arg	Leu	Pro	His	Ser
			100					105					110		
Pro	Pro	Pro	Arg	Ala	Gly	His	Pro	Ala	Pro	Gln	Leu	Ala	Gly	Trp	His
			115				120					125			
Gln	Ala	Pro	Arg	Leu	Lys	Arg	Thr	Val	Pro	Val	Arg	Arg	Ser		
	130					135					140				

&lt;210&gt; 5293

&lt;211&gt; 1428

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5293

tcagactgtg tgggtggtt ccccgccgc agctccgtac gggcttgat tgctgggcct  
 60  
 cgggtgacccc cagcctcccc cactcgggtt ctgagcttga gctggcggct ctttaactct  
 120  
 gcttcaactgt tgctcttggc aacatccact tccgggagcg agtgccgttt cccccgctca  
 180  
 ccgcgggcta gggagcgtgg gattccggac tgtgagcggc tgtagtgcg tcgcagctgc  
 240  
 tggcgatccg gcgaccctcg gccggcagga ccccggggcc acgcagccgg ggccttctca  
 300  
 acgcctcagt acctcggcgg gaccgccatg gttctgctgc acgtgaagcg gggcgacgag  
 360  
 agccagttcc tgctgcaggc gcctgggagt accgagctgg aggagctcac ggtgcaggtg  
 420  
 gccccgggtct ataatgggcg gctcaagggtg cagcgcctct gctcagaaat ggaagaatta  
 480  
 gccgaacatg gcatatttct ccctccta atgcaaggac tgaccgatga tcagattgaa  
 540  
 gaattgaaat tgaaggatga atgggggtgaa aaatgcgtac ccagcggagg tgcagtgttt  
 600  
 aaaaaggatg atattggacg aaggaatggg caagctccaa atgagaagat gaagcaagtg  
 660  
 ttaaagaaga ctatagaaga agccaaggca ataatatcta agaaacaagt ggaagccggt  
 720  
 gtctgtgtta ccatggagat ggtgaaagat gccttggacc agcttcgagg cgcggtgatg  
 780  
 attgtttacc ccatggggtt gccaccgtat gatcccatcc gcatggagtt tgaaaataag  
 840  
 gaagacttgt cgggaacaca ggcagggtc aacgtcatta aagaggcaga ggcgcagctg  
 900  
 tgggtgggcag ccaaggagct gagaagaacg aagaagcttt cagactacgt ggggaagaat  
 960  
 gaaaaaacca aaattatcgc caagattcag caaaggggac agggagctcc agcccgagag  
 1020  
 cctattatta gcagtgagga gcagaagcag ctgatgctgt actatcacag aagacaagag  
 1080  
 gagctcaaga gattggaaga aaatgatgat gatgcctatt taaactcacc atgggcggat  
 1140

aacactgctt tgaaaagaca ttttcatgga gtgaaagaca taaagtggag accaagatga  
1200  
agttcaccag ctgatgacac ttccaaagag attagctcac ctttctccta ggcaattata  
1260  
atttaaaaaa aaaaaaaagg ccacttactg ccctctgtaa aagatgtaa catttctagt  
1320  
tttcttttag tgtgaatttt taaaatagca gttattcaag gttttagaac ttaataaata  
1380  
cctagtcaga agaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaa  
1428

<210> 5294

<211> 290

<212> PRT

<213> Homo sapiens

<400> 5294

Met	Val	Leu	Leu	His	Val	Lys	Arg	Gly	Asp	Glu	Ser	Gln	Phe	Leu	Leu
1				5					10					15	
Gln	Ala	Pro	Gly	Ser	Thr	Glu	Leu	Glu	Glu	Leu	Thr	Val	Gln	Val	Ala
			20					25					30		
Arg	Val	Tyr	Asn	Gly	Arg	Leu	Lys	Val	Gln	Arg	Leu	Cys	Ser	Glu	Met
		35				40						45			
Glu	Glu	Leu	Ala	Glu	His	Gly	Ile	Phe	Leu	Pro	Pro	Asn	Met	Gln	Gly
	50					55					60				
Leu	Thr	Asp	Asp	Gln	Ile	Glu	Glu	Leu	Lys	Leu	Lys	Asp	Glu	Trp	Gly
65					70					75				80	
Glu	Lys	Cys	Val	Pro	Ser	Gly	Gly	Ala	Val	Phe	Lys	Lys	Asp	Asp	Ile
			85					90						95	
Gly	Arg	Arg	Asn	Gly	Gln	Ala	Pro	Asn	Glu	Lys	Met	Lys	Gln	Val	Leu
			100					105						110	
Lys	Lys	Thr	Ile	Glu	Glu	Ala	Lys	Ala	Ile	Ile	Ser	Lys	Lys	Gln	Val
		115					120							125	
Glu	Ala	Gly	Val	Cys	Val	Thr	Met	Glu	Met	Val	Lys	Asp	Ala	Leu	Asp
	130					135					140				
Gln	Leu	Arg	Gly	Ala	Val	Met	Ile	Val	Tyr	Pro	Met	Gly	Leu	Pro	Pro
145					150					155				160	
Tyr	Asp	Pro	Ile	Arg	Met	Glu	Phe	Glu	Asn	Lys	Glu	Asp	Leu	Ser	Gly
			165					170						175	
Thr	Gln	Ala	Gly	Leu	Asn	Val	Ile	Lys	Glu	Ala	Glu	Ala	Gln	Leu	Trp
		180						185					190		
Trp	Ala	Ala	Lys	Glu	Leu	Arg	Arg	Thr	Lys	Lys	Leu	Ser	Asp	Tyr	Val
	195					200						205			
Gly	Lys	Asn	Glu	Lys	Thr	Lys	Ile	Ile	Ala	Lys	Ile	Gln	Gln	Arg	Gly
	210					215						220			
Gln	Gly	Ala	Pro	Ala	Arg	Glu	Pro	Ile	Ile	Ser	Ser	Glu	Glu	Gln	Lys
225					230					235				240	
Gln	Leu	Met	Leu	Tyr	Tyr	His	Arg	Arg	Gln	Glu	Glu	Leu	Lys	Arg	Leu
			245					250						255	
Glu	Glu	Asn	Asp	Asp	Asp	Ala	Tyr	Leu	Asn	Ser	Pro	Trp	Ala	Asp	Asn
		260						265					270		
Thr	Ala	Leu	Lys	Arg	His	Phe	His	Gly	Val	Lys	Asp	Ile	Lys	Trp	Arg
	275					280						285			
Pro	Arg														

290

<210> 5295  
<211> 1451  
<212> DNA  
<213> Homo sapiens

<400> 5295  
tttttttttt tttttttttt tttttttttt attcagctaa catttattga gcccttaatg  
60  
aacacataag agtttttgact tcacggcagt tcatactggg acctcagacc actgaaggca  
120  
gacagtaacg agcagtgctg gccgggcccc actttcagag ggggcggaag ggcattctga  
180  
cacgtgtcat atggttaagag gcgcatccac tcacccaggc ctggtgcagg actctgcaag  
240  
gccctcctga gtaaagagtg gccacgaagg gctgctaggc agcacctact cttggaatca  
300  
agcagggaaa aagtgcaaaa ttggagctgg cgggaggtgt gtgtgcctgc cccacagatg  
360  
gctgtggtga gccacaaagc accaagattc tgttcttcat tcagcaacca cccatgagcc  
420  
tcctgcttta ttccaatcgc atggcaccag cctgaaaacc tctctccctt ctgagaggaa  
480  
tgctggaatg aactccact ctgcccctcc ctccctcctt ccttgctcag ggtccatgtg  
540  
aacagcaggc cattgttggg aagtgcctgt tgcagtcatt cttacacccc cacagccact  
600  
gccccacaca cccactggtg gctaccaagg cccgtcaata gatcttgtgt ccaccgagcc  
660  
ctggtgtcca ggtccagcag ccagacaggc tgaaggttcc ctctgccat cacagagtag  
720  
ccaagcacta caaagagggt ttcatggcca gattcctgac ggctggcccc ttacagggca  
780  
gatcctgtcc ttacaggtgt caaggttgga gggctcctggg tcctccatga ccctgggggg  
840  
ttgctggtcc cccatcttgg ttcttgagtc tcatccttcc aagatgacct tgagagcttt  
900  
aagctcatcc tgggtgaggg ggttcaagtt aaaacccttc agctccgggt tgccttgggc  
960  
ctcaaaaagg cggttgacct tcactttaag ttgcttccgc agtttttcta tttctttatc  
1020  
cagatgatct tgatcttttt caatcatttc ctttgtctca gggtgaggca tcttgataaa  
1080  
catgttcccc aagcaaacca tcacatcttc agagaggctg agatccttct gcagggccct  
1140  
caggccctct cgattctgat tccttttagt gtccaggtec acaatctgcc gcttgctcgc  
1200  
cagcacctcc tcggcgagct cctccacttc tacaaggtag cgcagcactc gctctgcctc  
1260  
gggtgatagc atagcgccca ccaactccgc ttgcggctct cgcgcgaccc cgggatctcc  
1320  
gcttcgggaa catgtttatc aagatgcctc accctgagac aaaggaaatg attgaaaaag  
1380

4462

atcaagatca tctggataaa gaaatagaaa aactgctggaa gcaacttaaa gtgaagggtcc  
 1440  
 ccttcacgcg t  
 1451

<210> 5296  
 <211> 133  
 <212> PRT  
 <213> Homo sapiens

<400> 5296  
 Met Leu Ser Pro Glu Ala Glu Arg Val Leu Arg Tyr Leu Val Glu Val  
 1 5 10 15  
 Glu Glu Leu Ala Glu Glu Val Leu Ala Asp Lys Arg Gln Ile Val Asp  
 20 25 30  
 Leu Asp Thr Lys Arg Asn Gln Asn Arg Glu Gly Leu Arg Ala Leu Gln  
 35 40 45  
 Lys Asp Leu Ser Leu Ser Glu Asp Val Met Val Cys Phe Gly Asn Met  
 50 55 60  
 Phe Ile Lys Met Pro His Pro Glu Thr Lys Glu Met Ile Glu Lys Asp  
 65 70 75 80  
 Gln Asp His Leu Asp Lys Glu Ile Glu Lys Leu Arg Lys Gln Leu Lys  
 85 90 95  
 Val Lys Val Asn Arg Leu Phe Glu Ala Gln Gly Lys Pro Glu Leu Lys  
 100 105 110  
 Gly Phe Asn Leu Asn Pro Leu Asn Gln Asp Glu Leu Lys Ala Leu Lys  
 115 120 125  
 Val Ile Leu Lys Gly  
 130

<210> 5297  
 <211> 5318  
 <212> DNA  
 <213> Homo sapiens

<400> 5297  
 tgtgacagag cagtaagact aacgaaacaa ggggtcaaata catctggatc tgatacactc  
 60  
 agcttcccat tgctgagagc tcttgctgtt gattgtggaa aaggacacct cttctgctgg  
 120  
 gagtgccttg gtgaagcaca tgagccttgt gactgccaaa catggaagaa ttggctgcaa  
 180  
 aaaataaccg aaatgaaacc agaagaactt gtgggagtta gtgaagccta cgaggatgcc  
 240  
 gccaatgttc tctggttatt aactaactcc aagccttgtg ccaactgtaa gtctccaata  
 300  
 cagaagaatg aaggctgcaa tcacatgcag tgtgctaagt gcaagtatga cttttgctgg  
 360  
 atttgccttg aagagtggaa aaaacatagt tcgtccactg gaggttatta cggatgtact  
 420  
 cgctatgaag tcattcaaca cgtggaggag caatccaagg aaatgactgt ggaggctgag  
 480  
 aaaaaacaca aacgatttca ggaacttgac agatttatgc actattatac aagatttaaa  
 540

aaccatgagc atagttatca gctagaacaa cgccttctta aaacagccaa agaaaagatg  
600  
gagcaattga gcagagctct caaagaaact gaaggaggct gtccagatac cactttcatt  
660  
gaagatgcag ttcatgtgct cttaaaaact cggcgcattc tcaagtgttc ttatccatat  
720  
ggatttttct tggaacctaa aagcaciaag aaagaaatth ttgaactaat gcaaacagac  
780  
ctagaaatgg tcaatgaaga ccttgcccag aaagtcaata ggccttacct tgcacacccc  
840  
cgccacaaga tcatcaaagc agcatgcctt gtacagcaga agaggcaaga attcctggca  
900  
tctgtggctc ggggagtagc tcctgcagac tcaccagaag ctccaaggcg cagctttgct  
960  
ggtggaacat gggattggga atatttagga tttgcatcac cagaggaata tgctgaattt  
1020  
cagtatcgga ggaggcacag acaacgtcgt cgaggagatg ttcacagtct actcagtaat  
1080  
cctccagacc ctgatgagcc aagtgaagc actttagata ttccagaagg cggcagcagc  
1140  
agccgcaggc ctggcacatc cgtggtaagt tctgcatcta tgagtgtgct gcacagctct  
1200  
tccctgcgtg actacacccc tgccagtcgc tctgaaaacc aggactctct tcaggctctg  
1260  
agttccttgg atgaagacga tcccaatata cttcttgcaa tacagttatc actgcaagag  
1320  
tctgggctgg ccctcgatga agaaactaga gacttctca gtaatgaagc atccttaggt  
1380  
gcgataggca cttctttacc ttccaggctg gactctgtcc ccagaaatac agatagccct  
1440  
cgggctgcat tgagcagctc tgagcttttg gaacttggtg acagcctcat gagactagga  
1500  
gcagagaatg acccatthtc aactgacacc ctgagctcac accctctcag tgaggcaaga  
1560  
agtgaattct gtcctcatc tagtgatcct gactcagctg gccaggaccc caacatcaat  
1620  
gacaatcttc tcggcaacat catggcttgg tttcatgaca tgaaccctca gagtattgcc  
1680  
ctgattcctc cagcaactac agaaatcagt gcagattccc agtccccctg tatcaaagat  
1740  
gggtcagaag gtgtgaagga tgtggaactg gtgctgccag aagattcaat gtttgaagat  
1800  
gccagtgtca gtgaaggtag aggaaccag atagaagaaa atcctttgga agaaaatatt  
1860  
ctggcggggg aagcagcatc tcaagctggg gacagtggta acgaggcagc caacagagga  
1920  
gatggttcag atgtttcaag tcaaacacct caaacctcaa gtgactggct tgaacaagta  
1980  
catttagtgt gaactgcaca catctgggct ctaaatgaat tacaggta ca gatggtatgc  
2040  
taggtggagt atgcttgata gagactttga ttcacttaat tccaactcag tgataaacca  
2100  
ctgacattag ggttgaatac agagaagttc ccttgaatgg tagcttcatt ttttatttta  
2160

accttacagg gaatttcctt tgtacttaat tgaatagctt ttcccctttt tgctgacaaa  
2220  
aagaagagca agagaaagag aaacaaaaat gaaataaata agttgtattc cacactctaa  
2280  
gaaaatgcag tcctctattt agcctaggct tgacaatact taaattgaac atttaaacta  
2340  
aaggcttact ccctaactct tgggtggctt tcctttaaaa aaaaaaaaaa agttttcttc  
2400  
attctagaaa tttattttgg ataaatccga taacatatat gtcccaatc tctttgtgct  
2460  
cttcataac ttacttcctt tttgtctgag caatgtgaat tgaagtctct ttagtaccac  
2520  
atctaccata gtgtaattag ttttaatttt cacatgaatc aaagggtttcc tttcatgtct  
2580  
atttacagtc caattgtgcc aaactcctac ttgtgtgctg actaacaagg catttaggtg  
2640  
tgcagcatcc tagagtgtc cagggcagtg tcagcgttct cgggagtaaa aggtgccact  
2700  
tggtagcaat gatattccag aattaaatgg gttttgttg ccatggagac tgcatttata  
2760  
taaagttagc ctgtagctta agttaactaa acctaagtct gctgttaaaa acagtttatt  
2820  
ttaatattaa aatacagttg attagcaaca gcgggtgctgt attttaagag acactttatt  
2880  
ggaagtcaa tcatagttat ttgttttcac aattttacag tgcattctaa ttactgatgg  
2940  
gtgcaattac ttttaatcgt gttttataaa atagaaaaaa agtggagttt tcatgagtta  
3000  
tagtaaatcc cagcattatt aagaaattca ataaaacatc ctgcgcaaca tgttaccgtg  
3060  
cctttgccta acctaaatgg atagttgcca gttaaataag tgagtaattc aaatttcaat  
3120  
gtctcttctg aagtaactat gctatgaatt gcaaagacct ccataaaacc acctatggcc  
3180  
ttgtttttac actaactata acaactaaat gttcaatcag tttgtttgcc taactagcaa  
3240  
atgctgacat gtgtttgttc tactgcgcaa tactcatttg ctgtgtgatt actgtttagt  
3300  
gttgaaaaaa atcaacttcc tagttatcag tgtcttactg tgaagaaaat actggtctta  
3360  
gttgtaatta ggatacaatg gtacagtgtg taattaaaac tagagtaaac tgttggaatg  
3420  
gctgtttttac ttaaatatta tcaaaactag cataacataa gcaaaataga taagtacaac  
3480  
actccattta gtgttttgcc agattgttac cagaagtcta cagataccaa actttcagtt  
3540  
ctgagtttgt acaggcaagt cctgggctgg gtaaaaagtt atattaatat tggtatccac  
3600  
aagagatgtg attatgggtt ttgattactt ttttttttcc aaacctgct tttgaaatat  
3660  
ccttgctactt aaaattcata ttgctaagac actgtattag aatatttaat attccccaga  
3720  
tcctcttagg ataaactgtg ggaatcctcc tatgccatgg atatcaaagg tccacattag  
3780



tttttatttc tccagtgatc agaaacattg atatcaatcc ctattaaatt agtgggggga  
3840  
atattaactt tatctacagt gtattactgt atattaaact gaaatagtcc attaaaggat  
3900  
ttttttataa atttattttg gattaaaaat atcaacacca ataagttttt agaccaagtt  
3960  
gtaatttttc caatatagag tctttgcac acactgaggc atcttgca gctgcagtta  
4020  
aggtgagaaa gaatgctctg tgtgaagaca gtgtacacaa tgggttccgg tttccttgca  
4080  
ccttgctgag tatcctttat ttctgtgctg ttctctcctg agcatgaaaa atgatcatta  
4140  
tccaatttgt atttccttgg tacatatttt aaaaacaaca cagtcattga ctttacaatt  
4200  
cagtaatgaa gtttggcaaa gcctattttg taaacaagtt aattttataa tgtaaaaaaa  
4260  
aaaagttaat ctaaccttga cttgttattt gcactttcat agtctatact tgatacatc  
4320  
ccactttata tacagtagga ttctacaaac gtgtagatgt ttggccaaat gaatgctgtt  
4380  
aataatatgt aaaattcttt gattaaacat ttattactta aactatttcc atttttgtct  
4440  
cattaaatta taaacttcat ttaaaactaa ttagaaagca aatcttgctt tatattaaat  
4500  
accctccaat atgacagtat taatttgggt ctattatgta attgaatagt gcctaatt  
4560  
tttacagtaa cccacttgct gaaaattgta tacccaagag gttaaattga tttcactttt  
4620  
ttgtttttga ttgtttttat ttttattttt ttattttttt aaaagattta tttatttatt  
4680  
atatgtaagt acactgtagc tgtcttcaga cacaccagaa gagggcccca gatcttgta  
4740  
cagatgggtg tgagccacca tgtcgggtgct gggaattgaa ctcacgacct tgagaagagc  
4800  
agtcagtgtc cgtaaccgct gagccatctc tccagccctc caaagattca cttttaaaag  
4860  
atcatttgat gaaaagccag ggagtatggg gtgtgggggtg tggaaggcct tcaggaaaag  
4920  
gcttgcatgt ggcgatgtgc ttttcctgcc ctcccatga gggtcctagc cattagtagc  
4980  
agatgtaata atggtgacag agctcagata aaacaaaaag aatggagaaa tgccaaggct  
5040  
caaataaaaa tgaggcttga tatatttcca gaatgaaaaa atatttaata aaatcagggg  
5100  
caagagaaaag tccctatacc acttgtcttc ctccctcact tctggtcaga ccaagggcgc  
5160  
ctgcatcgga agctatctga cctcaagtca ggcacactgt gtcttcaggg cttctcagga  
5220  
tgcttcttta taaggtaaaa ccacacaggt caggggaagac ccaggtacag gctgggggagc  
5280  
cccacaggta tagggctgag ggagcccagt aggtaccg  
5318

&lt;210&gt; 5298

&lt;211&gt; 663

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5298

Cys Asp Arg Ala Val Arg Leu Thr Lys Gln Gly Ser Asn Thr Ser Gly  
1 5 10 15  
Ser Asp Thr Leu Ser Phe Pro Leu Leu Arg Ala Pro Ala Val Asp Cys  
20 25 30  
Gly Lys Gly His Leu Phe Cys Trp Glu Cys Leu Gly Glu Ala His Glu  
35 40 45  
Pro Cys Asp Cys Gln Thr Trp Lys Asn Trp Leu Gln Lys Ile Thr Glu  
50 55 60  
Met Lys Pro Glu Glu Leu Val Gly Val Ser Glu Ala Tyr Glu Asp Ala  
65 70 75 80  
Ala Asn Cys Leu Trp Leu Leu Thr Asn Ser Lys Pro Cys Ala Asn Cys  
85 90 95  
Lys Ser Pro Ile Gln Lys Asn Glu Gly Cys Asn His Met Gln Cys Ala  
100 105 110  
Lys Cys Lys Tyr Asp Phe Cys Trp Ile Cys Leu Glu Glu Trp Lys Lys  
115 120 125  
His Ser Ser Ser Thr Gly Gly Tyr Tyr Gly Cys Thr Arg Tyr Glu Val  
130 135 140  
Ile Gln His Val Glu Glu Gln Ser Lys Glu Met Thr Val Glu Ala Glu  
145 150 155 160  
Lys Lys His Lys Arg Phe Gln Glu Leu Asp Arg Phe Met His Tyr Tyr  
165 170 175  
Thr Arg Phe Lys Asn His Glu His Ser Tyr Gln Leu Glu Gln Arg Leu  
180 185 190  
Leu Lys Thr Ala Lys Glu Lys Met Glu Gln Leu Ser Arg Ala Leu Lys  
195 200 205  
Glu Thr Glu Gly Gly Cys Pro Asp Thr Thr Phe Ile Glu Asp Ala Val  
210 215 220  
His Val Leu Leu Lys Thr Arg Arg Ile Leu Lys Cys Ser Tyr Pro Tyr  
225 230 235 240  
Gly Phe Phe Leu Glu Pro Lys Ser Thr Lys Lys Glu Ile Phe Glu Leu  
245 250 255  
Met Gln Thr Asp Leu Glu Met Val Thr Glu Asp Leu Ala Gln Lys Val  
260 265 270  
Asn Arg Pro Tyr Leu Arg Thr Pro Arg His Lys Ile Ile Lys Ala Ala  
275 280 285  
Cys Leu Val Gln Gln Lys Arg Gln Glu Phe Leu Ala Ser Val Ala Arg  
290 295 300  
Gly Val Ala Pro Ala Asp Ser Pro Glu Ala Pro Arg Arg Ser Phe Ala  
305 310 315 320  
Gly Gly Thr Trp Asp Trp Glu Tyr Leu Gly Phe Ala Ser Pro Glu Glu  
325 330 335  
Tyr Ala Glu Phe Gln Tyr Arg Arg Arg His Arg Gln Arg Arg Arg Gly  
340 345 350  
Asp Val His Ser Leu Leu Ser Asn Pro Pro Asp Pro Asp Glu Pro Ser  
355 360 365  
Glu Ser Thr Leu Asp Ile Pro Glu Gly Gly Ser Ser Ser Arg Arg Pro  
370 375 380  
Gly Thr Ser Val Val Ser Ser Ala Ser Met Ser Val Leu His Ser Ser

385                      390                      395                      400  
 Ser Leu Arg Asp Tyr Thr Pro Ala Ser Arg Ser Glu Asn Gln Asp Ser  
                          405                      410                      415  
 Leu Gln Ala Leu Ser Ser Leu Asp Glu Asp Asp Pro Asn Ile Leu Leu  
                          420                      425                      430  
 Ala Ile Gln Leu Ser Leu Gln Glu Ser Gly Leu Ala Leu Asp Glu Glu  
                          435                      440                      445  
 Thr Arg Asp Phe Leu Ser Asn Glu Ala Ser Leu Gly Ala Ile Gly Thr  
                          450                      455                      460  
 Ser Leu Pro Ser Arg Leu Asp Ser Val Pro Arg Asn Thr Asp Ser Pro  
 465                      470                      475                      480  
 Arg Ala Ala Leu Ser Ser Ser Glu Leu Leu Glu Leu Gly Asp Ser Leu  
                          485                      490                      495  
 Met Arg Leu Gly Ala Glu Asn Asp Pro Phe Ser Thr Asp Thr Leu Ser  
                          500                      505                      510  
 Ser His Pro Leu Ser Glu Ala Arg Ser Asp Phe Cys Pro Ser Ser Ser  
                          515                      520                      525  
 Asp Pro Asp Ser Ala Gly Gln Asp Pro Asn Ile Asn Asp Asn Leu Leu  
                          530                      535                      540  
 Gly Asn Ile Met Ala Trp Phe His Asp Met Asn Pro Gln Ser Ile Ala  
 545                      550                      555                      560  
 Leu Ile Pro Pro Ala Thr Thr Glu Ile Ser Ala Asp Ser Gln Leu Pro  
                          565                      570                      575  
 Cys Ile Lys Asp Gly Ser Glu Gly Val Lys Asp Val Glu Leu Val Leu  
                          580                      585                      590  
 Pro Glu Asp Ser Met Phe Glu Asp Ala Ser Val Ser Glu Gly Arg Gly  
                          595                      600                      605  
 Thr Gln Ile Glu Glu Asn Pro Leu Glu Glu Asn Ile Leu Ala Gly Glu  
                          610                      615                      620  
 Ala Ala Ser Gln Ala Gly Asp Ser Gly Asn Glu Ala Ala Asn Arg Gly  
 625                      630                      635                      640  
 Asp Gly Ser Asp Val Ser Ser Gln Thr Pro Gln Thr Ser Ser Asp Trp  
                          645                      650                      655  
 Leu Glu Gln Val His Leu Val  
                          660

<210> 5299  
 <211> 368  
 <212> DNA  
 <213> Homo sapiens

<400> 5299  
 nactgcagcg gcagcgacca cagcagtctg ggcttggagc agttacagga ttacatggtc  
 60  
 acgttgcgga gtaagctggg gccctcgag atccagcagt ttgcgatgct gctgcgggag  
 120  
 taccggctgg ggctgcccac ccaggactat tgcacaggcc tgctgaagct ctacggagac  
 180  
 cggcgcaagt tcctcctcct tgggatgcgg cccttcatcc cggaccagga catcggctac  
 240  
 ttcgagggct tcctggaggg cgtgggcatc cgcgagggcg gcatacctcac tgacagcttc  
 300  
 ggccgcatca agccagatga gctccacgtc ggcctccgca gtgcgcagct cacgatggcg  
 360

cggcgagc  
368

<210> 5300  
<211> 122  
<212> PRT  
<213> Homo sapiens

<400> 5300  
Xaa Cys Ser Gly Ser Asp His Ser Ser Leu Gly Leu Glu Gln Leu Gln  
1 5 10 15  
Asp Tyr Met Val Thr Leu Arg Ser Lys Leu Gly Pro Leu Glu Ile Gln  
20 25 30  
Gln Phe Ala Met Leu Leu Arg Glu Tyr Arg Leu Gly Leu Pro Ile Gln  
35 40 45  
Asp Tyr Cys Thr Gly Leu Leu Lys Leu Tyr Gly Asp Arg Arg Lys Phe  
50 55 60  
Leu Leu Leu Gly Met Arg Pro Phe Ile Pro Asp Gln Asp Ile Gly Tyr  
65 70 75 80  
Phe Glu Gly Phe Leu Glu Gly Val Gly Ile Arg Glu Gly Gly Ile Leu  
85 90 95  
Thr Asp Ser Phe Gly Arg Ile Lys Pro Asp Glu Leu His Val Gly Leu  
100 105 110  
Arg Ser Ala Gln Leu Thr Met Ala Arg Arg  
115 120

<210> 5301  
<211> 6712  
<212> DNA  
<213> Homo sapiens

<400> 5301  
ntattagcca agctaagtta ctcttttgcc tctgttggtt actcaagtct tttctcttct  
60  
gtccttctgc cagccttacc ccactcctta atcctctgaa ccagcaaacc attgccaagt  
120  
tctgatgcaa agtggtttat aggctgact ggaccagact aaaagtgttc aaaatagcaa  
180  
gcaacaagga gcagaaatcc atattagaat gggatatgga ctatatttat attggtacag  
240  
aatgccttca ataaagagtt gtgagttgtg taggtgagtt gccatggagc taaaaatag  
300  
agttgatatt ctgaaatcct agacagccat ctccaagggtt aagaaaaatc cttatgcact  
360  
cacttgcaaa gatatccaca gcatgctctt ggagcgccgc cggccgggag gcgaaggatg  
420  
caggcggctc cgcgcgccgg ctgcggggca gcgctcctgc tgtggattgt cagcagctgc  
480  
ctctgcagag cctggacggc tccctccacg tcccaaaaat gtgatgagcc acttgtctct  
540  
ggactcccc atgtggcttt cagcagctcc tctccatct ctggtagcta ttctcccggc  
600  
tatgccaaga taaacaagag aggaggtgct gggggatggt ctccatcaga cagcgaccat  
660

tatcaatggc ttcaggttga ctttggcaat cggaagcaga tcagtgccat tgcaacccaa  
720  
ggaaggtata gcagctcaga ttgggtgacc caataccgga tgctctacag cgacacaggg  
780  
agaaactgga aaccctatca tcaagatggg aatatctggg catttcccgg aaacattaac  
840  
tctgacggtg tgggtccgga cgaattacag catccgatta ttgcccgcta tgtgcgcata  
900  
gtgcctctgg attggaatgg agaaggctgc attggactca gaattgaagt ttatggctgt  
960  
tcttactggg ctgatgttat caactttgat ggccatgttg tattaccata tagattcaga  
1020  
aacaagaaga tgaaaacact gaaagatgtc attgccttga actttaagac gtctgaaagt  
1080  
gaaggagtaa tcctgcacgg agaaggacag caaggagatt acattacctt ggaactgaaa  
1140  
aaagccaagc tggctctcag tttaaactta ggaagcaacc agcttggccc catatatggc  
1200  
cacacatcag tgatgacagg aagtttgctg gatgaccacc actggcactc tgtggtcatt  
1260  
gagcgccagg ggcggagcat taacctcact ctggacagga gcatgcagca cttccgtacc  
1320  
aatggagagt ttgactacct ggacttggac tatgagataa cctttggagg catcccttcc  
1380  
tctggcaagc ccagctccag cagtagaaag aatttcaaag gctgcatgga aagcatcaac  
1440  
tacaatggcg tcaacattac tgatcttgcc agaaggaaga aattagagcc ctcaaagtg  
1500  
ggaaatttga gcttttcttg tgtggaaccc tatacgggtgc ctgtcttttt caacgctaca  
1560  
agttacctgg aggtgcccgg acggcttaac caggacctgt tctcagtcag tttccagttt  
1620  
aggacatgga accccaatgg tctcctgggc ttcagtcact ttgcggataa tttgggcaat  
1680  
gtggagattg acctcactga aagcaaagtg ggtgttcaca tcaacatcac acagaccaag  
1740  
atgagccaaa tcgatatttc ctcaggttct gggttgaatg atggacagtg gcacgaggtt  
1800  
cgcttcttag ccaaggaaaa ttttgctatt ctcaccatcg atggagatga agcatcagca  
1860  
gttcgaacta atagtccct tcaagttaaa actggcgaga agtacttttt tggaggtttt  
1920  
ctgaaccaga tgaataactc aagtcactct gtccttcagc cttcattcca aggatgcatg  
1980  
cagctcattc aagtggacga tcaacttgta aatttatacg aagtggcaca aaggaagccg  
2040  
ggaagtttcg cgaatgtcag cattgacatg tgtgcatca tagacagatg tgtgcccaat  
2100  
cactgtgagc atggtggaaa gtgctcgcaa acatgggaca gcttcaaag cacttgtgat  
2160  
gagacaggat acagtggggc cacctgccac aactctatct acgagccttc ctgtgaagcc  
2220  
tacaaacacc taggacagac atcaaattat tactggatag atcctgatgg cagcggacct  
2280

ctggggcctc tgaaagttta ctgcaacatg acagaggaca aagtgtggac catagtgtct  
2340  
catgacttgc agatgcagac gcctgtggtc ggctacaacc cagaaaaata ctgagtgaca  
2400  
cagctcgttt acagcgctc catggaccag ataagtgcc tcaactgacag tgccgagtac  
2460  
tgcgagcagt atgtctccta tttctgcaag atgtcaagat tgttgaacac cccagatgga  
2520  
agcccttaca cttggtgggt tggcaaagcc aacgagaagc actactactg gggaggctct  
2580  
gggcctggaa tccagaaatg tgccctgcggc atcgaacgca actgcacaga tcccaagtac  
2640  
tactgtaact gcgacgcgga ctacaagcaa tggaggaagg atgctggttt cttatcatac  
2700  
aaagatcacc tgccagtga ccaagtgggtg gttggagata ctgaccgtca aggctcagaa  
2760  
gccaaattga gcgtaggtcc tctgcgctgc caaggagaca ggaattattg gaatgccgcc  
2820  
tctttcccaa acccatcctc ctacctgcac ttctctactt tccaagggga aactagcgt  
2880  
gacatttctt tctacttcaa aacattaacc ccctggggag tgtttcttga aaatatggga  
2940  
aaggaagatt tcatcaagct ggagctgaag tctgccacag aagtgtcctt ttcatttgat  
3000  
gtgggaaatg ggccagtaga gattgtagt aggtcaccaa cccctctcaa cgatgaccag  
3060  
tggcaccggg tcaactgcaga gaggaatgtc aagcaggcca gcctacaggt ggaccggcta  
3120  
ccgcagcaga tccgcaaggc cccaacagaa ggccacaccc gcctggagct ctacagccag  
3180  
ttatttgtgg gtggtgctgg gggccagcag ggcttcctgg gctgcatccg ctcttgagg  
3240  
atgaatggg tgacacttga cctggaggaa agagcaaagg tcacatctgg gttcatatcc  
3300  
ggatgctcgg gccattgcac cagctatgga acaaactgtg aaaatggagg caaatgccta  
3360  
gagagatacc acggttactc ctgcgattgc tctaatactg catatgatgg aacattttgc  
3420  
aacaagatg ttggtgcatt ttttgaagaa gggatgtggc tacgatataa ctttcaggca  
3480  
ccagcaacaa atgccagaga ctccagcagc agagtagaca acgctcccga ccagcagaac  
3540  
tcccacccgg acctggcaca ggaggagatc cgcttcagct tcagcaccac caaggcgccc  
3600  
tgcattctcc tctacatcag ctcttcacc acagacttct tggcagtcct cgtcaaacc  
3660  
actggaagct tacagattcg atacaacctg ggtggcaccc gagagccata caatattgac  
3720  
gtagaccaca ggaacatggc caatggacag cccacagtg tcaacatcac ccgccacgag  
3780  
aagaccatct ttctcaagct cgatcattat cttctgtga gttaccatct gccaaagtca  
3840  
tccgacccc tcttcaattc tccaagtcg ctctttctgg gaaaagttat agaaacaggg  
3900

aaaattgacc aagagattca caaatacaac accccaggat tcaactggttg cctctccaga  
3960  
gtccagttca accagatcgc ccctctcaag gccgccttga ggcagacaaa cgctcgggt  
4020  
cacgtccaca tccagggcga gctggtggag tccaactgcg gggcctcgcc gctgaccctc  
4080  
tccccatgt cgtccgccac cgaccctgg cacctggatc acctggattc agccagtgcg  
4140  
gattttccat ataatccagg acaaggccaa gctataagaa atggagtcaa cagaaactcg  
4200  
gctatcattg gaggcgtcat tgctgtggtg attttcacca tcctgtgcac cctggtcttc  
4260  
ctgatccggt acatgttccg ccacaagggc acctaccata ccaacgaagc aaagggggcg  
4320  
gagtcggcag agagcgcgga cgccgccatc atgaacaacg accccaactt cacagagacc  
4380  
attgatgaaa gcaaaaagga atggctcatt tgaggggtgg ctacttggct atgggatagg  
4440  
gaggagggaa ttactagga ggagagaaag ggacaaaagc accctgcttc atactcttga  
4500  
gcacatcctt aaaatatcag cacaagttgg gggaggcagg caatggaata taatggaata  
4560  
ttcttgagac tgatcacaaa aaaaaaaaaa acctttttaa tatttcttta tagctgagtt  
4620  
ttcccttctg tatcaaaaca aaataataca aaaaatgctt ttagagtta agcaatggtt  
4680  
gaaatttgta ggtactatct gtcttatttt gtgtgtgttt agagggtgtc taaagaccg  
4740  
tggtaacagg gcaagtttct tacgttttta agagccctta gaacgtgggt attttttttc  
4800  
ttgagaaaag ctaatgcacc tacagatggc cccaacatt ctcttccttt tgcttctagt  
4860  
caaccttaat gggctgttac agaaactagt tcgtgtttat atactatttc ctttgatgtc  
4920  
ctataagtgc gaaaagaaag gggcaaagag aacctattat ttgccagttt ttaagcagag  
4980  
ctcaatctat gccagctctc tggcatctgg ggttcctgac tgataccagc agttgaagga  
5040  
agagagtgc tggcacctgg tgtgtaacga cacaatcagc acaactggag agaggcata  
5100  
aagaaccagg gaaggtagtt tgatttttca ttgaattcta caagctaata ttgttccacg  
5160  
tatgtagtct tagaccaata gctgtaacta tcagctgcaa taccatggtg accagctgtt  
5220  
acaaaagatt ttttctgtt ttatctgaaa catactggat ttatatatgt ataagcgct  
5280  
caatggggaa ttagagccag atgttatgat ttgtttgtc tttttctttt atagttatag  
5340  
caaaaatatg gataatttct agtgaatgca taaattaggt tgcgtttctt attttgctt  
5400  
aaatctctgg tagtttttcc accctgtga cacaatccta atagacagtg tcctgtaaat  
5460  
ggacacaaca caataaagtc aagttattat tgctgttact ctggatgata tggaaaacac  
5520

tgccatattt taaatcaact actccacgtg tttttccatc caatcacact gctgtgattc  
 5580  
 agggatcttt cttctaaaac ggacacattt gaacctcagg ttcacacaaa acctgggtacc  
 5640  
 tggttgcttc cagaggatgg agaagtgtag ttaatcacac ctcttagttt aatctgaaat  
 5700  
 cttgacctag ttatttaaca aataaatacc tcattgatta tatttaaaag taatacactt  
 5760  
 cctgtaaaca aatggggaca atgcatccaa aaaatctttt taaacagatt acacaaaaat  
 5820  
 tatttccaga aaggctacca tttatcatca ttatatctca agcctcttat acttaataag  
 5880  
 cactttctaa aaagtcttga gatccaccca ttctgaggaa ttcaatatga tcactttttc  
 5940  
 cttctttgcc tgggagaggt taagaggagg tttcgaaggt atagatgcta ttgttctgat  
 6000  
 ggcccggctg aataaaatgg aaattctagt ttgttagaat tatgcattct ttttcaagat  
 6060  
 tctcagtgtg cctaacttat tggagcacat cagtttcttg ggtaatggaa aacattacct  
 6120  
 agagttgcca gtggcacatt acaccagtac agagcacatt ccaaaggaga cattggacca  
 6180  
 gttaattccc atacaagtca aggtaacaga acaaaaggga atcctgatgc ccttttacca  
 6240  
 ttgctggttg agctcaggca ctgtcatgga cacccttaat tttaaaagggt tttaatcatt  
 6300  
 cttctataaa atacatttaa aatggaaaaa tacttaatat cactaaatat cagaacaatg  
 6360  
 taacatttac aaatgacata ttgaaagcaa aggctgtttt atttagccaa gatgattacc  
 6420  
 attaggagtt actttatgta ttgttgaaag caaattttta acatgatgtt ttagaagtgt  
 6480  
 ttctgatttt taaacctggt ttacaggtat tacttctgca cttaccaa atgcccagat  
 6540  
 ggaaatttat tatttcttgc aattcccgtg atagctctgt tctttatgca ttgtctcaac  
 6600  
 actttccctt ttttcccaa atgagtagag aattaaagcc acccaaaaca gcttctgcta  
 6660  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 6712

&lt;210&gt; 5302

&lt;211&gt; 1339

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5302

Ala	Pro	Pro	Ala	Gly	Arg	Arg	Arg	Met	Gln	Ala	Ala	Pro	Arg	Ala	Gly
1				5				10					15		
Cys	Gly	Ala	Ala	Leu	Leu	Leu	Trp	Ile	Val	Ser	Ser	Cys	Leu	Cys	Arg
			20				25					30			
Ala	Trp	Thr	Ala	Pro	Ser	Thr	Ser	Gln	Lys	Cys	Asp	Glu	Pro	Leu	Val
	35					40				45					
Ser	Gly	Leu	Pro	His	Val	Ala	Phe	Ser	Ser	Ser	Ser	Ser	Ile	Ser	Gly



50	55	60			
Ser Tyr Ser Pro Gly Tyr Ala Lys Ile Asn Lys Arg Gly Gly Ala Gly					
65	70	75	80		
Gly Trp Ser Pro Ser Asp Ser Asp His Tyr Gln Trp Leu Gln Val Asp					
	85	90	95		
Phe Gly Asn Arg Lys Gln Ile Ser Ala Ile Ala Thr Gln Gly Arg Tyr					
	100	105	110		
Ser Ser Ser Asp Trp Val Thr Gln Tyr Arg Met Leu Tyr Ser Asp Thr					
	115	120	125		
Gly Arg Asn Trp Lys Pro Tyr His Gln Asp Gly Asn Ile Trp Ala Phe					
	130	135	140		
Pro Gly Asn Ile Asn Ser Asp Gly Val Val Arg His Glu Leu Gln His					
145	150	155	160		
Pro Ile Ile Ala Arg Tyr Val Arg Ile Val Pro Leu Asp Trp Asn Gly					
	165	170	175		
Glu Gly Arg Ile Gly Leu Arg Ile Glu Val Tyr Gly Cys Ser Tyr Trp					
	180	185	190		
Ala Asp Val Ile Asn Phe Asp Gly His Val Val Leu Pro Tyr Arg Phe					
	195	200	205		
Arg Asn Lys Lys Met Lys Thr Leu Lys Asp Val Ile Ala Leu Asn Phe					
	210	215	220		
Lys Thr Ser Glu Ser Glu Gly Val Ile Leu His Gly Glu Gly Gln Gln					
225	230	235	240		
Gly Asp Tyr Ile Thr Leu Glu Leu Lys Lys Ala Lys Leu Val Leu Ser					
	245	250	255		
Leu Asn Leu Gly Ser Asn Gln Leu Gly Pro Ile Tyr Gly His Thr Ser					
	260	265	270		
Val Met Thr Gly Ser Leu Leu Asp Asp His His Trp His Ser Val Val					
	275	280	285		
Ile Glu Arg Gln Gly Arg Ser Ile Asn Leu Thr Leu Asp Arg Ser Met					
	290	295	300		
Gln His Phe Arg Thr Asn Gly Glu Phe Asp Tyr Leu Asp Leu Asp Tyr					
305	310	315	320		
Glu Ile Thr Phe Gly Gly Ile Pro Phe Ser Gly Lys Pro Ser Ser Ser					
	325	330	335		
Ser Arg Lys Asn Phe Lys Gly Cys Met Glu Ser Ile Asn Tyr Asn Gly					
	340	345	350		
Val Asn Ile Thr Asp Leu Ala Arg Arg Lys Lys Leu Glu Pro Ser Asn					
	355	360	365		
Val Gly Asn Leu Ser Phe Ser Cys Val Glu Pro Tyr Thr Val Pro Val					
	370	375	380		
Phe Phe Asn Ala Thr Ser Tyr Leu Glu Val Pro Gly Arg Leu Asn Gln					
385	390	395	400		
Asp Leu Phe Ser Val Ser Phe Gln Phe Arg Thr Trp Asn Pro Asn Gly					
	405	410	415		
Leu Leu Val Phe Ser His Phe Ala Asp Asn Leu Gly Asn Val Glu Ile					
	420	425	430		
Asp Leu Thr Glu Ser Lys Val Gly Val His Ile Asn Ile Thr Gln Thr					
	435	440	445		
Lys Met Ser Gln Ile Asp Ile Ser Ser Gly Ser Gly Leu Asn Asp Gly					
	450	455	460		
Gln Trp His Glu Val Arg Phe Leu Ala Lys Glu Asn Phe Ala Ile Leu					
465	470	475	480		
Thr Ile Asp Gly Asp Glu Ala Ser Ala Val Arg Thr Asn Ser Pro Leu					

485														490				495			
Gln	Val	Lys	Thr	Gly	Glu	Lys	Tyr	Phe	Phe	Gly	Gly	Phe	Leu	Asn	Gln						
500								505					510								
Met	Asn	Asn	Ser	Ser	His	Ser	Val	Leu	Gln	Pro	Ser	Phe	Gln	Gly	Cys						
515							520					525									
Met	Gln	Leu	Ile	Gln	Val	Asp	Asp	Gln	Leu	Val	Asn	Leu	Tyr	Glu	Val						
530						535					540										
Ala	Gln	Arg	Lys	Pro	Gly	Ser	Phe	Ala	Asn	Val	Ser	Ile	Asp	Met	Cys						
545					550					555					560						
Ala	Ile	Ile	Asp	Arg	Cys	Val	Pro	Asn	His	Cys	Glu	His	Gly	Gly	Lys						
				565					570					575							
Cys	Ser	Gln	Thr	Trp	Asp	Ser	Phe	Lys	Cys	Thr	Cys	Asp	Glu	Thr	Gly						
580								585				590									
Tyr	Ser	Gly	Ala	Thr	Cys	His	Asn	Ser	Ile	Tyr	Glu	Pro	Ser	Cys	Glu						
595							600				605										
Ala	Tyr	Lys	His	Leu	Gly	Gln	Thr	Ser	Asn	Tyr	Tyr	Trp	Ile	Asp	Pro						
610						615					620										
Asp	Gly	Ser	Gly	Pro	Leu	Gly	Pro	Leu	Lys	Val	Tyr	Cys	Asn	Met	Thr						
625					630					635					640						
Glu	Asp	Lys	Val	Trp	Thr	Ile	Val	Ser	His	Asp	Leu	Gln	Met	Gln	Thr						
				645					650					655							
Pro	Val	Val	Gly	Tyr	Asn	Pro	Glu	Lys	Tyr	Ser	Val	Thr	Gln	Leu	Val						
660							665					670									
Tyr	Ser	Ala	Ser	Met	Asp	Gln	Ile	Ser	Ala	Ile	Thr	Asp	Ser	Ala	Glu						
675							680				685										
Tyr	Cys	Glu	Gln	Tyr	Val	Ser	Tyr	Phe	Cys	Lys	Met	Ser	Arg	Leu	Leu						
690						695				700											
Asn	Thr	Pro	Asp	Gly	Ser	Pro	Tyr	Thr	Trp	Trp	Val	Gly	Lys	Ala	Asn						
705					710					715					720						
Glu	Lys	His	Tyr	Tyr	Trp	Gly	Gly	Ser	Gly	Pro	Gly	Ile	Gln	Lys	Cys						
				725					730					735							
Ala	Cys	Gly	Ile	Glu	Arg	Asn	Cys	Thr	Asp	Pro	Lys	Tyr	Tyr	Cys	Asn						
740							745					750									
Cys	Asp	Ala	Asp	Tyr	Lys	Gln	Trp	Arg	Lys	Asp	Ala	Gly	Phe	Leu	Ser						
755							760				765										
Tyr	Lys	Asp	His	Leu	Pro	Val	Ser	Gln	Val	Val	Val	Gly	Asp	Thr	Asp						
770						775					780										
Arg	Gln	Gly	Ser	Glu	Ala	Lys	Leu	Ser	Val	Gly	Pro	Leu	Arg	Cys	Gln						
785					790					795					800						
Gly	Asp	Arg	Asn	Tyr	Trp	Asn	Ala	Ala	Ser	Phe	Pro	Asn	Pro	Ser	Ser						
				805					810					815							
Tyr	Leu	His	Phe	Ser	Thr	Phe	Gln	Gly	Glu	Thr	Ser	Ala	Asp	Ile	Ser						
820							825					830									

915					920					925						
Gln	Leu	Phe	Val	Gly	Gly	Ala	Gly	Gly	Gln	Gln	Gly	Phe	Leu	Gly	Cys	
930					935					940						
Ile	Arg	Ser	Leu	Arg	Met	Asn	Gly	Val	Thr	Leu	Asp	Leu	Glu	Glu	Arg	
945					950					955					960	
Ala	Lys	Val	Thr	Ser	Gly	Phe	Ile	Ser	Gly	Cys	Ser	Gly	His	Cys	Thr	
965					970					975						
Ser	Tyr	Gly	Thr	Asn	Cys	Glu	Asn	Gly	Gly	Lys	Cys	Leu	Glu	Arg	Tyr	
980					985					990						
His	Gly	Tyr	Ser	Cys	Asp	Cys	Ser	Asn	Thr	Ala	Tyr	Asp	Gly	Thr	Phe	
995					1000					1005						
Cys	Asn	Lys	Asp	Val	Gly	Ala	Phe	Phe	Glu	Glu	Gly	Met	Trp	Leu	Arg	
1010					1015					1020						
Tyr	Asn	Phe	Gln	Ala	Pro	Ala	Thr	Asn	Ala	Arg	Asp	Ser	Ser	Ser	Arg	
1025					1030					1035					1040	
Val	Asp	Asn	Ala	Pro	Asp	Gln	Gln	Asn	Ser	His	Pro	Asp	Leu	Ala	Gln	
1045					1050					1055						
Glu	Glu	Ile	Arg	Phe	Ser	Phe	Ser	Thr	Thr	Lys	Ala	Pro	Cys	Ile	Leu	
1060					1065					1070						
Leu	Tyr	Ile	Ser	Ser	Phe	Thr	Thr	Asp	Phe	Leu	Ala	Val	Leu	Val	Lys	
1075					1080					1085						
Pro	Thr	Gly	Ser	Leu	Gln	Ile	Arg	Tyr	Asn	Leu	Gly	Gly	Thr	Arg	Glu	
1090					1095					1100						
Pro	Tyr	Asn	Ile	Asp	Val	Asp	His	Arg	Asn	Met	Ala	Asn	Gly	Gln	Pro	
1105					1110					1115					1120	
His	Ser	Val	Asn	Ile	Thr	Arg	His	Glu	Lys	Thr	Ile	Phe	Leu	Lys	Leu	
1125					1130					1135						
Asp	His	Tyr	Pro	Ser	Val	Ser	Tyr	His	Leu	Pro	Ser	Ser	Ser	Asp	Thr	
1140					1145					1150						
Leu	Phe	Asn	Ser	Pro	Lys	Ser	Leu	Phe	Leu	Gly	Lys	Val	Ile	Glu	Thr	
1155					1160					1165						
Gly	Lys	Ile	Asp	Gln	Glu	Ile	His	Lys	Tyr	Asn	Thr	Pro	Gly	Phe	Thr	
1170					1175					1180						
Gly	Cys	Leu	Ser	Arg	Val	Gln	Phe	Asn	Gln	Ile	Ala	Pro	Leu	Lys	Ala	
1185					1190					1195					1200	
Ala	Leu	Arg	Gln	Thr	Asn	Ala	Ser	Ala	His	Val	His	Ile	Gln	Gly	Glu	
1205					1210					1215						
Leu	Val	Glu	Ser	Asn	Cys	Gly	Ala	Ser	Pro	Leu	Thr	Leu	Ser	Pro	Met	
1220					1225					1230						
Ser	Ser	Ala	Thr	Asp	Pro	Trp	His	Leu	Asp	His	Leu	Asp	Ser	Ala	Ser	
1235					1240					1245						
Ala	Asp	Phe	Pro	Tyr	Asn	Pro	Gly	Gln	Gly	Gln	Ala	Ile	Arg	Asn	Gly	
1250					1255					1260						
Val	Asn	Arg	Asn	Ser	Ala	Ile	Ile	Gly	Gly	Val	Ile	Ala	Val	Val	Ile	
1265					1270					1275					1280	
Phe	Thr	Ile	Leu	Cys	Thr	Leu	Val	Phe	Leu	Ile	Arg	Tyr	Met	Phe	Arg	
1285					1290					1295						
His	Lys	Gly	Thr	Tyr	His	Thr	Asn	Glu	Ala	Lys	Gly	Ala	Glu	Ser	Ala	
1300					1305					1310						
Glu	Ser	Ala	Asp	Ala	Ala	Ile	Met	Asn	Asn	Asp	Pro	Asn	Phe	Thr	Glu	
1315					1320					1325						
Thr	Ile	Asp	Glu	Ser	Lys	Lys	Glu	Trp	Leu	Ile						
1330					1335											

<210> 5303  
<211> 334  
<212> DNA  
<213> Homo sapiens

<400> 5303  
cgtacgcacg ccactgacag ccgcccagca gaagtacaag aagggcgatg tggctctgcac  
60  
accacgcgga atacgaaaga agttcaacgg caagccgggg cgcccggctg ggctcacgag  
120  
atggctgcat gaaggagtca cagcggcgag gctactgctc acgccacctg tccatgcgaa  
180  
ccaaagagat ggaaggcctg gcagacagtg ggcctggcgg ggcgggcccgg cccgcggccg  
240  
tggcagcccc tgagggcagc acggagtttg actgggggtga tgagacgtcg agggacagtg  
300  
gaggccagca gtgtggcgac tcgtggagac tcac  
334

<210> 5304  
<211> 95  
<212> PRT  
<213> Homo sapiens

<400> 5304  
Met Trp Ser Ala His Pro Ala Glu Tyr Glu Arg Ser Ser Thr Ala Ser  
1 5 10 15  
Arg Gly Ala Arg Leu Gly Ser Arg Asp Gly Cys Met Lys Glu Ser Gln  
20 25 30  
Arg Arg Gly Tyr Cys Ser Arg His Leu Ser Met Arg Thr Lys Glu Met  
35 40 45  
Glu Gly Leu Ala Asp Ser Gly Pro Gly Gly Ala Gly Arg Pro Ala Ala  
50 55 60  
Val Ala Ala Arg Glu Gly Ser Thr Glu Phe Asp Trp Gly Asp Glu Thr  
65 70 75 80  
Ser Arg Asp Ser Gly Gly Gln Gln Cys Gly Asp Ser Trp Arg Leu  
85 90 95

<210> 5305  
<211> 582  
<212> DNA  
<213> Homo sapiens

<400> 5305  
nttgccggcc cctgcacatt taggatatgc tcctggatgg ggagtgggtt gtgccacagg  
60  
cctctgtccc ccaggatgtc ttgtggtggc ggtcggccgt tctgcccccc agggcacccc  
120  
ctgttgtagg cactggctag ggaggggag gcctccttcc tgcccctcga gacactcttg  
180  
ggagatgcat tttccgtctg gctcacaggg ggaggggtgag gctttgtacc ccagcccctg  
240  
cccagggcac tgtgaggggtg ggtgctggct gagcccctgg ggcagaagga gtggggcagg  
300

cgggggtcttt gttctcggct cccacagcag agccagggtga gggggggcct gccaggacta  
 360  
 gacagaagtg gggcggcctg aaccctgctt ccagccatgg ccagggggcca cggaaccg  
 420  
 caggggtgtc tgaagccgcc ctgtcagctg gccgggtccaa gcctgtggct ggagctgggtg  
 480  
 tgtgtttatc taataaagtc ccacagggtgc ctcaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 540  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 582

<210> 5306  
 <211> 62  
 <212> PRT  
 <213> Homo sapiens

<400> 5306  
 Met Ala Arg Gly His Gly Thr Arg Gln Gly Cys Leu Lys Pro Pro Cys  
 1 5 10 15  
 Gln Leu Ala Gly Pro Ser Leu Trp Leu Glu Leu Val Cys Val Tyr Leu  
 20 25 30  
 Ile Lys Ser His Arg Cys Leu Lys Lys Lys Lys Lys Lys Lys Lys  
 35 40 45  
 Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys Lys  
 50 55 60

<210> 5307  
 <211> 1551  
 <212> DNA  
 <213> Homo sapiens

<400> 5307  
 cagggtgtgt tgacagtgtg cgtctttcca atcccatgtt cctccattcg tgtgtctgtt  
 60  
 ataaaactga gtgaaggctg ctatgacctg tgttactctt gggttacagg aggtgcaaac  
 120  
 cattctgtct cccagccttt cttctctctt tgtgtgtctc cagcacttcc ttcttttcta  
 180  
 acatggcctg gagagagtct ctctctcctt gtctctgtct ctttaataata gtttttaacg  
 240  
 tggacatctc ttccttggtt cagtgggttt taaatactga gaagaaccaa gtcagggttt  
 300  
 ttaaagcaga ctaaaagcat gaaattgctt tcagaagaat gtatatcatc gggaaaagtt  
 360  
 cgggggcaga gtgggggaat caggctttat tcaaaagaaa cagttgaaaa catgggactt  
 420  
 tttctacca atgcccattt cagcactcct ctgagactaa ttgggaaacg gggaaattct  
 480  
 tggaattttt tttttaagaa acttttttgt gtttttttta attttagggt acttattagt  
 540  
 gaaacctcat ttttagatctg acattggtag atagatggat ttaggcaaat atgatgcgtt  
 600  
 tgtggggaat ccacgtgggt gacgttagaa cctcccttct gcagactgtt gcctgtcatc  
 660

taagcgaatt ggaaatgctg agcttccata agtcagctga gttttaaaagg taaacgttat  
 720  
 ggctgaagta gtaaagcacc tgaccacaaa acctcttgta aaaacagccc tgagtaggta  
 780  
 tttccagggc tccacaaagt tgcttatggg aatcctgagc tgcttttcac catctcaaga  
 840  
 agcctaagaa gttatatatt taatcaggta gacaaaacag ttcaaagcat aaggtccatg  
 900  
 gtggtggaat atggatgcaa gtgattctaa gtttgtggat ttgtggatag cagagggatc  
 960  
 gggacctctt ggaggaaccc tgggtaccaa gctcccaggc ccttcctcta tcatggatgc  
 1020  
 tgggtgactt tgggaagtca ccacctcttc ccaagcctgt ttcccatatc acagatgtgg  
 1080  
 ggccatggcc tcgatgatgg tctccacagg tctttccacc tctgtgagtc caagtcaggt  
 1140  
 caatcagcaa ggacccatct ctgccctggg tcagctcctc agaaccaacc cccagcatct  
 1200  
 ctaaagcaaa agcctcacct caagggtgc tcagaagaga gcaccttcag catgagttgt  
 1260  
 tgctggaaga tctaataagc tgtgtttcct gggaagtggg gctttactta gccctgtgga  
 1320  
 caacttctct atgcatctgt gtgagcagat gatcattgta ttaccttcta tcggtagtaa  
 1380  
 gcttggaata ataatttaag aatacaatgg agaaatgtaa ataagtatct atgtaaattt  
 1440  
 gtttaaaata aactgaatgt atttaatggg ccatttatat gttcttttat gtaacatgta  
 1500  
 gtttaataaa gttcctgttt atgagagtca tgtttcatct cagcttcttc c  
 1551

<210> 5308  
 <211> 112  
 <212> PRT  
 <213> Homo sapiens

<400> 5308  
 Met Leu Gly Val Gly Ser Glu Glu Leu Thr Gln Gly Arg Asp Gly Ser  
 1 5 10 15  
 Leu Leu Ile Asp Leu Thr Trp Thr His Arg Gly Gly Lys Thr Cys Gly  
 20 25 30  
 Asp His His Arg Gly His Gly Pro Thr Ser Val Ile Trp Glu Thr Gly  
 35 40 45  
 Leu Gly Arg Gly Gly Asp Phe Pro Lys Ser Pro Ser Ile His Asp Arg  
 50 55 60  
 Gly Arg Ala Trp Glu Leu Gly Thr Gln Gly Ser Ser Lys Arg Ser Arg  
 65 70 75 80  
 Ser Leu Cys Tyr Pro Gln Ile His Lys Leu Arg Ile Thr Cys Ile His  
 85 90 95  
 Phe Pro Pro Pro Trp Thr Leu Cys Phe Glu Leu Phe Cys Leu Pro Asp  
 100 105 110

<210> 5309  
 <211> 2078

<212> DNA  
<213> Homo sapiens

<400> 5309  
nncgcagctg tggccggaga ggtgggagtc ggagcgaggc cctctcgggg gagcaggggtg  
60  
aacgccggcc actctaggat cctcactcgg ggagaggagg catagctcgc ggggtcaccc  
120  
tccaccgcga acgtactccg ggtcggcctt gcgctcgggg cctgagaggg gcggcggcgg  
180  
ggtcaggggc cgcacaaaga atgaaccagc agtggaagag aaaatactgt aagctggctg  
240  
actgctggtg aagaaaatgc tttatttttg tggcaggcat ctgtgggatc tgtaatagaa  
300  
atgatggctg gctgtggtga aattgatcat tcaataaaca tgcttcctac aaacaggaaa  
360  
gcgaacgagt cctgttctaa tactgcacct tctttaaccg tccctgaatg tgccatttgt  
420  
ctgcaaacat gtgttcatcc agtcagtctg ccctgtaagc acgttttctg ctatctatgt  
480  
gtaaaaggag cttcatggct tggaaagcgg tgtgctcttt gtcgacaaga aattcccag  
540  
gatttccttg acaagccaac cttgttgtca ccagaagaac tcaaggcagc aagtagagga  
600  
aatgggtgaat atgcatggta ttatgaagga agaaatgggt ggtggcagta cgatgagcgc  
660  
actagtagag agctggaaga tgctttttcc aaaggtaaaa agaactga aatgttaatt  
720  
gctggctttc tgtatgtcgc tgatcttgaa aacatggttc aatataggag aaatgaacat  
780  
ggacgtcgca ggaagattaa gcgagatata atagatatac caaagaaggg agtagctgga  
840  
cttaggctag actgtgatgc taataccgta aacctagcaa gagagagctc tgctgacgga  
900  
gcggacagtg tatcagcaca gagtggagct tctgttcagc ccctagtgtc ttctgtaagg  
960  
cccctaacat cagtagatgg tcagttaaca agccctgcaa caccatcccc tgatgcaagc  
1020  
acttctctgg aagactcttt tgctcattta caactcagtg gagacaacac agctgaaagg  
1080  
agtcataggg gagaaggaga agaagatcat gaatcaccat cttcaggcag ggtaccagca  
1140  
ccagacacct ccattgaaga aactgaatca gatgccagta gtgatagtga ggatgtatct  
1200  
gcagttgttg cacagcactc cttgacccaa cagagacttt tggtttctaa tgcaaaccag  
1260  
acagtacccg atcgatcaga tcgatcggga actgatcgat cagtagcagg gggtggaaca  
1320  
gtgagtgtca gtgtcagatc tagaaggcct gatggacagt gcacagtaac tgaagtttaa  
1380  
ataaaaatgt cttcagctcc atgctcaagg ttgaaagggt tacctgtaaa tttctgcca  
1440  
cataacatta tactcatccc tagtagtgca ttttgggagt tgggggtggga aggggtatgg  
1500

gaaggataga ctcataatta aaatgtctaa catgtctctg ttgagaaatt tatttaatgt  
 1560  
 aaggaacttg ggtgtaata gttgagagct gtttagtaat aaccagttt tcttgaggtc  
 1620  
 tgtttacttt atacttttta aaaacttctg tagttctttt ggccagtgtg tttgtattat  
 1680  
 ctgtgcatta atggctcctca tctgactcct gcattgtgtc ttatttttct gcatggattg  
 1740  
 gcataagacc attactaaaa tttggcacct gtgagatggt tgatattatg aacaggaaac  
 1800  
 ataatttaat gtatgaatag atgtgaattt gggatttcaa aatagatgaa taacaactat  
 1860  
 tttatagtaa agttattgaa atggaaatga aaacagccag taacttatgt ttcagaatgt  
 1920  
 ttgtaacaca cttcatggtg ttcccatagg ctttgcgtgc tagtcttata gtttgagggt  
 1980  
 tttttggtct gcatttttct ttttgattac aaaatttata atttaataaa tactagagtt  
 2040  
 tatcaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 2078

<210> 5310  
 <211> 359  
 <212> PRT  
 <213> Homo sapiens

<400> 5310  
 Met Met Ala Gly Cys Gly Glu Ile Asp His Ser Ile Asn Met Leu Pro  
 1 5 10 15  
 Thr Asn Arg Lys Ala Asn Glu Ser Cys Ser Asn Thr Ala Pro Ser Leu  
 20 25 30  
 Thr Val Pro Glu Cys Ala Ile Cys Leu Gln Thr Cys Val His Pro Val  
 35 40 45  
 Ser Leu Pro Cys Lys His Val Phe Cys Tyr Leu Cys Val Lys Gly Ala  
 50 55 60  
 Ser Trp Leu Gly Lys Arg Cys Ala Leu Cys Arg Gln Glu Ile Pro Glu  
 65 70 75 80  
 Asp Phe Leu Asp Lys Pro Thr Leu Leu Ser Pro Glu Glu Leu Lys Ala  
 85 90 95  
 Ala Ser Arg Gly Asn Gly Glu Tyr Ala Trp Tyr Tyr Glu Gly Arg Asn  
 100 105 110  
 Gly Trp Trp Gln Tyr Asp Glu Arg Thr Ser Arg Glu Leu Glu Asp Ala  
 115 120 125  
 Phe Ser Lys Gly Lys Lys Asn Thr Glu Met Leu Ile Ala Gly Phe Leu  
 130 135 140  
 Tyr Val Ala Asp Leu Glu Asn Met Val Gln Tyr Arg Arg Asn Glu His  
 145 150 155 160  
 Gly Arg Arg Arg Lys Ile Lys Arg Asp Ile Ile Asp Ile Pro Lys Lys  
 165 170 175  
 Gly Val Ala Gly Leu Arg Leu Asp Cys Asp Ala Asn Thr Val Asn Leu  
 180 185 190  
 Ala Arg Glu Ser Ser Ala Asp Gly Ala Asp Ser Val Ser Ala Gln Ser  
 195 200 205  
 Gly Ala Ser Val Gln Pro Leu Val Ser Ser Val Arg Pro Leu Thr Ser



210	215	220
Val Asp Gly Gln Leu Thr Ser Pro Ala Thr Pro Ser Pro Asp Ala Ser		
225	230	235
Thr Ser Leu Glu Asp Ser Phe Ala His Leu Gln Leu Ser Gly Asp Asn		240
	245	250
Thr Ala Glu Arg Ser His Arg Gly Glu Gly Glu Glu Asp His Glu Ser		255
	260	265
Pro Ser Ser Gly Arg Val Pro Ala Pro Asp Thr Ser Ile Glu Glu Thr		270
	275	280
Glu Ser Asp Ala Ser Ser Asp Ser Glu Asp Val Ser Ala Val Val Ala		285
	290	295
Gln His Ser Leu Thr Gln Gln Arg Leu Leu Val Ser Asn Ala Asn Gln		300
305	310	315
Thr Val Pro Asp Arg Ser Asp Arg Ser Gly Thr Asp Arg Ser Val Ala		320
	325	330
Gly Gly Gly Thr Val Ser Val Ser Val Arg Ser Arg Arg Pro Asp Gly		335
	340	345
Gln Cys Thr Val Thr Glu Val		350
355		

<210> 5311  
 <211> 572  
 <212> DNA  
 <213> Homo sapiens

<400> 5311  
 tgccactgtg aaggagatga tgagagcccc ctgatcaccc cctgccactg cacaggaagc  
 60  
 ctccacttcg tgcaccaggc ctacctgcag cagtggatca agagctccga cacgcgctgc  
 120  
 tgcgagctct gcaagtatga gttcatcatg gagaccaagc tgaagccact gagaaaatgg  
 180  
 gagaagttgc agatgacgtc cagcgagcgc aggaagatca tgtgctcagt gacattccac  
 240  
 gtcattgccca tcacatgtgt ggtctgggtcc ttgtatgtgc tcattgaccg tcctgctgag  
 300  
 gagatcaagc aggggcaggc aacaggaatc ctagaatggc ccttttggac taaattggtg  
 360  
 gttgtggcca tcggcttcac cagaggactt ctttttatgt atgttcagt taaagtgtat  
 420  
 gtgcaattgt ggaagagact caaggcctat aatagagtga tctatgttca aaactgtcca  
 480  
 gaaacaagca aaaagaatat ttttgaaaaa tctccactaa cagagcccaa ctttgaaaat  
 540  
 aaacatggat atggaatctg tcattccgac ac  
 572

<210> 5312  
 <211> 190  
 <212> PRT  
 <213> Homo sapiens

<400> 5312  
 Cys His Cys Glu Gly Asp Asp Glu Ser Pro Leu Ile Thr Pro Cys His

1 5 10 15  
Cys Thr Gly Ser Leu His Phe Val His Gln Ala Tyr Leu Gln Gln Trp  
20 25 30  
Ile Lys Ser Ser Asp Thr Arg Cys Cys Glu Leu Cys Lys Tyr Glu Phe  
35 40 45  
Ile Met Glu Thr Lys Leu Lys Pro Leu Arg Lys Trp Glu Lys Leu Gln  
50 55 60  
Met Thr Ser Ser Glu Arg Arg Lys Ile Met Cys Ser Val Thr Phe His  
65 70 75 80  
Val Ile Ala Ile Thr Cys Val Val Trp Ser Leu Tyr Val Leu Ile Asp  
85 90 95  
Arg Pro Ala Glu Glu Ile Lys Gln Gly Gln Ala Thr Gly Ile Leu Glu  
100 105 110  
Trp Pro Phe Trp Thr Lys Leu Val Val Ala Ile Gly Phe Thr Arg  
115 120 125  
Gly Leu Leu Phe Met Tyr Val Gln Cys Lys Val Tyr Val Gln Leu Trp  
130 135 140  
Lys Arg Leu Lys Ala Tyr Asn Arg Val Ile Tyr Val Gln Asn Cys Pro  
145 150 155 160  
Glu Thr Ser Lys Lys Asn Ile Phe Glu Lys Ser Pro Leu Thr Glu Pro  
165 170 175  
Asn Phe Glu Asn Lys His Gly Tyr Gly Ile Cys His Ser Asp  
180 185 190

&lt;210&gt; 5313

&lt;211&gt; 322

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5313

cggggcccgc gagaggaaga ggggtgacaag cgcagcgctg cccccagac tcgggtcctg  
60  
aaaggcgtca tgcgagtagg catcctggcg aaaggcctcc tcctgcgtgg ggacaggaac  
120  
gtgcgcctcg ctctgctctg ctccgagaag cccacgcaca gcctgctgcy gaggatcgcc  
180  
cagcagctgc cccggcaaca caggcaattc cacgttggtg gcgactggcc tgtgcatatg  
240  
gaggtgttca gtgacctggc cctggacact cctgctaaca ggacacacac atactctctt  
300  
acacacatac atgtccacac ac  
322

&lt;210&gt; 5314

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5314

Arg Gly Arg Arg Glu Glu Glu Gly Asp Lys Arg Ser Val Ala Pro Gln  
1 5 10 15  
Thr Arg Val Leu Lys Gly Val Met Arg Val Gly Ile Leu Ala Lys Gly  
20 25 30  
Leu Leu Leu Arg Gly Asp Arg Asn Val Arg Leu Ala Leu Leu Cys Ser

		35						40						45					
Glu	Lys	Pro	Thr	His	Ser	Leu	Leu	Arg	Arg	Ile	Ala	Gln	Gln	Leu	Pro				
	50						55						60						
Arg	Gln	His	Arg	Gln	Phe	His	Val	Val	Cys	Asp	Trp	Pro	Val	His	Met				
65					70						75					80			
Glu	Val	Phe	Ser	Asp	Leu	Ala	Leu	Asp	Thr	Pro	Ala	Asn	Arg	Thr	His				
				85					90					95					
Thr	Tyr	Ser	Leu	Thr	His	Ile	His	Val	His	Thr									
		100						105											

```
<210> 5315
<211> 2298
<212> DNA
<213> Homo sapiens
```

<400>	5315					
ngctcccggc	ggcgacgact	acgaccacta	ggagagcgga	cggaggcggc	gcctgaagcg	60
gcggcggaacg	catgccccgg	gacggcgggc	ggacccgga	agacaaattc	ggggccccgg	120
gcatgtcccc	gggcctccgt	gaagggggcg	gcggcggtta	tggagatcgc	gccgcaggag	180
gcgcgcggcg	tgccggggcg	ggacggcgac	attgaagagg	ccccagctga	ggccgggtct	240
cccagccccg	cgtcgcccc	cgccgatggg	cgcctcaagg	ctgcagccaa	gcgcgtcaca	300
ttcccgctccg	acgaggatat	cgtgtctgga	gcagtggagc	ccaaagacct	ctggagacat	360
gcccagaatg	tgaccgtgga	cgaggctatc	ggcgccctaca	agcaggccctg	ccagaagctg	420
aactgcaggc	agatcccca	gctcctcagg	cagctgcagg	aattcacaga	cctcggggcac	480
cgctctgact	gtctggacct	gaaagggtgag	aagcttgact	acaagacctg	tgaggccctg	540
gaagaggtct	tcaagaggct	gcagttcaag	gtcgtggacc	tggagcagac	aaacctggat	600
gaagatggtg	cctcggccct	cttcgacatg	atcgagtact	acgagtcggc	caccacctc	660
aacatctcct	tcaacaagca	catcggcacc	cggggctggc	aggcgggccg	ccacatgatg	720
cgcaagacga	gctgcctgca	gtatctggac	gcccgcaca	cgccctgct	ggaccactcg	780
gcgcccttcg	tggcccgctg	cctgcgcac	cgcagcagcc	tggcagtgt	gcacttgga	840
aacgccagcc	tgctcggggcg	gcccctcatg	ctgctcgcca	cggccctgaa	gatgaacatg	900
aacctgcggg	agctgtacct	ggcggaaca	aagctcaacg	gcctgcagga	ctcggcccag	960
ctgggtaacc	tgctcaagtt	caactgtctc	ctgcagatcc	tggacctccg	gaacaaccac	1020
gtgctagact	cgggtctggc	ctacatctgc	gagggcctca	aggagcagag	gaaggggctg	1080
gtgacctgg	tgctgtggaa	caaccagctc	acgcacacag	gcatggcctt	cctgggcatg	1140

acactgtcgc acactcagag cctggagacg ctgaacctgg gccacaaccc catcgggaac  
1200  
gaggggtgtgc ggcacctcaa gaacgggctc atcagcaacc gcagcgtgct gcgcctcggg  
1260  
ctggcctcca ccaagctcac gtgcgagggc gcggtggcgg tggcggagtt catcgtgag  
1320  
agccccgcc tcctgagact ggaccttcgg gagaacgaga tcaagacagg cgggctcatg  
1380  
gcactgtcgt tggccctcaa ggtgaaccac tctactgtgc gcctggacct cgaccgtgaa  
1440  
cccaagaaag aggcggtgaa gagcttcac gagacgcaga aggcgctgct ggccgagatc  
1500  
cagaacggct gcaagcgcaa cttggtgctg gcgcgggaga gggaggagaa ggagcagccg  
1560  
ccacagctgt cggcctccat gcctgagacc accgccaccg agccccagcc cgacgacgag  
1620  
ccgcgcgctg ggggtgcagaa cggggccccc agccccgcac ccagcccga ctcagactca  
1680  
gactcggact cggatgggga ggaagaggag gaagaggaag gggagaggga cgagaccccc  
1740  
tccggggcca ttgacaccg ggacacaggg tcctctgagc ctcagccacc accggagccg  
1800  
cctcggtcag ggccaccact gccaacggc ctgaagcccg agttcgccct ggcactgccc  
1860  
cctgagccgc ccccggggccc tgaggtcaag gggggcagct gcggcctgga gcacgaactg  
1920  
agctgtcca agaacgagaa ggagctcgag gagctgcttc tggaagccag tcaggaatcc  
1980  
gggcaggaga cactgtgaca ctttaggtga ggccaggccc gggggccaca gcactcggga  
2040  
ggagctgaga gagcctctgg ctctgacagt ctctccccc atctctctc cccaagttcc  
2100  
ctttttccg tgggtctgag atgagctgag gccagagcca tgagaatctg ctcaccttc  
2160  
ccccagcctt cctgaggccc aggatgccag ggggtggggc cattctgggg cccccctccc  
2220  
cccacagcaa cactacaagg ggtgcaggag ctacagggag tggccctccg cgcgtgactc  
2280  
aagcacttct atttatga  
2298

&lt;210&gt; 5316

&lt;211&gt; 544

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5316

Gln	Asn	Val	Thr	Val	Asp	Glu	Val	Ile	Gly	Ala	Tyr	Lys	Gln	Ala	Cys
1				5					10					15	
Gln	Lys	Leu	Asn	Cys	Arg	Gln	Ile	Pro	Lys	Leu	Leu	Arg	Gln	Leu	Gln
			20					25					30		
Glu	Phe	Thr	Asp	Leu	Gly	His	Arg	Leu	Asp	Cys	Leu	Asp	Leu	Lys	Gly
		35					40				45				
Glu	Lys	Leu	Asp	Tyr	Lys	Thr	Cys	Glu	Ala	Leu	Glu	Glu	Val	Phe	Lys

50	55	60			
Arg	Leu	Gln	Phe	Lys	Val
65				70	
Asp	Gly	Ala	Ser	Ala	Leu
			85		
Thr	His	Leu	Asn	Ile	Ser
			100		
Gln	Ala	Ala	Ala	His	Met
			115		
Asp	Ala	Arg	Asn	Thr	Pro
			130		
Arg	Ala	Leu	Arg	Ile	Arg
			145		
Ala	Ser	Leu	Ser	Gly	Arg
			165		
Met	Asn	Met	Asn	Leu	Arg
			180		
Gly	Leu	Gln	Asp	Ser	Ala
			195		
Ser	Leu	Gln	Ile	Leu	Asp
			210		
Leu	Ala	Tyr	Ile	Cys	Glu
			225		
Thr	Leu	Val	Leu	Trp	Asn
			245		
Leu	Gly	Met	Thr	Leu	Ser
			260		
Gly	His	Asn	Pro	Ile	Gly
			275		
Leu	Ile	Ser	Asn	Arg	Ser
			290		
Leu	Thr	Cys	Glu	Gly	Ala
			305		
Pro	Arg	Leu	Leu	Arg	Leu
			325		
Gly	Leu	Met	Ala	Leu	Ser
			340		
Arg	Leu	Asp	Leu	Asp	Arg
			355		
Ile	Glu	Thr	Gln	Lys	Ala
			370		
Arg	Asn	Leu	Val	Leu	Ala
			385		
Gln	Leu	Ser	Ala	Ser	Met
			405		
Asp	Asp	Glu	Pro	Ala	Ala
			420		
Pro	Ser	Pro	Asp	Ser	Asp
			435		
Glu	Glu	Glu	Glu	Gly	Glu
			450		
Thr	Arg	Asp	Thr	Gly	Ser
			465		
Arg	Ser	Gly	Pro	Pro	Leu

485								490				495			
Ala	Leu	Pro	Pro	Glu	Pro	Pro	Pro	Gly	Pro	Glu	Val	Lys	Gly	Gly	Ser
500								505				510			
Cys	Gly	Leu	Glu	His	Glu	Leu	Ser	Cys	Ser	Lys	Asn	Glu	Lys	Glu	Leu
515								520				525			
Glu	Glu	Leu	Leu	Leu	Glu	Ala	Ser	Gln	Glu	Ser	Gly	Gln	Glu	Thr	Leu
530								535				540			

```
<210> 5317
<211> 889
<212> DNA
<213> Homo sapiens
```

<400>	5317				
ccaaggctca	ggccggggcc	aagagccgac	ccaagaagag	agagggcgtc	cacctcccca
60					
ccaccaagga	gctggccaag	cggcagcgcc	tgccctccgt	ggaaaaccgg	ccaaagatct
120					
cagccttct	gcccgcgccg	cagctctgga	agtggtcggg	gaatcccaca	cagcggcgty
180					
gcatgaagg	gaaggcccgg	aagctgttct	acaaggccat	cgtgcggggc	gaggagacc
240					
tgctgtctg	ggactgtgcc	gtcttctgt	cagctgggcg	gcccacctc	ccctacatcg
300					
gccgcatcga	gagcatgtgg	gagtcgtggg	gcagcaacat	ggtgggtcaag	gtcaagtgg
360					
tctaccacc	tgaggagacc	aagctgggca	agcagttcca	ccagggccag	cactgggacc
420					
agaagtccag	ccgcagcctc	ccggcgggcc	tgcggggtctc	cagccagagg	aaggacttca
480					
tgagcgcgc	gctataccag	tcctcgcgtg	tggaagaaaa	tgacgtgcag	acggtgtcgc
540					
acaagtgcct	ggtgggtggg	ctggagcagt	atgagcagat	gctgaagacc	aagaagtacc
600					
aggacagcga	gggcctgtac	tacctcgcgg	gcacctacga	gcccaccacg	ggcatgatct
660					
tctccacgga	cggcgtgccc	gtgctctgct	gagcccgccg	ggccctgcgg	gcccacctgt
720					
gccccgaggg	cggcccaggg	acccatctcc	atcactgcc	tggcgcggag	accacgtgcg
780					
ttgtgtgcat	gcgagcgctc	ctgcaggcgt	gtgcatgggg	ccaggtggac	gccccaggca
840					
agtgtgagtg	tgtacatgtg	tgtgcccgt	tgcatgcacg	tgtgtgcac	
889					

```
<210> 5318
<211> 132
<212> PRT
<213> Homo sapiens
```

```
<400> 5318
Arg Gly Arg Pro Gly Ser Cys Ser Thr Arg Pro Ser Cys Gly Ala Arg
 1             5             10             15
Arg Pro Cys Val Ser Gly Thr Val Pro Ser Ser Cys Gln Leu Gly Gly
```

```

      20      25      30
Pro Thr Ser Pro Thr Ser Ala Ala Ser Arg Ala Cys Gly Ser Arg Gly
      35      40      45
Ala Ala Thr Trp Trp Ser Arg Ser Ser Gly Ser Thr Thr Leu Arg Arg
      50      55      60
Pro Ser Trp Ala Ser Ser Thr Arg Ala Ser Thr Gly Thr Arg Ser
      65      70      75      80
Pro Ala Ala Ala Ser Arg Arg Pro Cys Gly Ser Pro Ala Arg Gly Arg
      85      90      95
Thr Ser Trp Ser Ala Arg Tyr Thr Ser Pro Arg Met Trp Thr Lys Met
      100      105      110
Thr Cys Arg Arg Cys Arg Thr Ser Ala Trp Trp Trp Ala Trp Ser Ser
      115      120      125
Met Ser Arg Cys
      130

```

<210> 5319  
 <211> 4231  
 <212> DNA  
 <213> Homo sapiens

```

<400> 5319
nncggccgcg cggcaggaac tggcgctgaa gaccctgggg acagatggcc tttttctctt
60
ttcctccttg gacactgacg gggatatgta catcagccct gaggagtcca aaccattgc
120
tgagaagcta acagggtaaa ctcccgcggc cagctacgag gaggaggagt tgccccctga
180
ccctagcgag gagacgctca ccatagaagc ccgattccag cctctgctcc cggagaccat
240
gaccaagagc aaagatggct tcctaggggt ctcccgctc gccctgtccg gcctccgaaa
300
ctggacagcc gccgcctcac caagtgcagt gtttgccacc cgccacttcc agcccttctt
360
tcccccgcca ggccaggagc tgggtgagcc ctggtggatc atccccagtg agctgagcat
420
gttcaactggc tacctgtcca acaaccgctt ctatccaccg ccgccaagg gcaaggagg
480
catcatccac cggctcctga gcatgttcca ccctcgggcc tttgtgaaga cccgctttgc
540
ccctcagggg gctgtggcct gcctgactgc catcagcgac ttctactaca ctgtgatgtt
600
ccggatccat gccgagttcc agctcagtga gccgcccagc tccccctttt ggttctcccc
660
tgctcagttc accggccaca tcctcctctc caaagaagcc acccacgtcc gcgacttccg
720
gctcttcgtg cccaaccaca ggtctctgaa tgtggacatg gaggggcttt acggggccag
780
tgaaagcagc aacatggagg tggacatcgg ctacataccc cagatggagc tggaggccac
840
gggcccctct gtgccctccg tgatcctgga tgaggatggc agcatgatcg acagccacct
900
gccctcaggg gagcccctgc agtttgtgtt tgaggagatc aagtggcagc aggagctgag
960

```

ctgggaggag gctgcccggc gcctggaggt ggccatgtac cccttcaaga aggtctccta  
1020  
cttgccgttc actgaggcct tcgaccgagc caaggctgag aacaagctgg tgcactcaat  
1080  
cctgctgtgg ggggccctgg atgaccagtc ctgctgaggt tcagggcgga ctctccggga  
1140  
gactgtcctg gaaagtccgc ccatcctcac cctgctcaac gagagcttca tcagcacctg  
1200  
gtccctggtg aaggagctgg aggaactgca gaacaaacag gagaactcgt cccaccagaa  
1260  
gctggctggc ctgcacctgg agaagtacag cttccccgtg gagatgatga tctgcctgcc  
1320  
caatggcacc gtggtccatc acatcaatgc caactacttc ttggacatca cctccgtgaa  
1380  
gcccaggaa atcgagagca atctcttcag cttctcatcc acctttgaag acccgtccac  
1440  
ggccacctac atgcagttcc tgaaggaggg actccggcgt ggccctgccc tcctccagcc  
1500  
ctagagtgcc tggacgggat ctgatgcaca ggccccacg cctcagagcc agagtggtec  
1560  
tcagccatt tcagactgca gatgccgcc actcccaccc cactcctagg ctgccttggg  
1620  
gggtacaaga tccactgagg gtggccacca cagccttggc tccatggtgg cgggtagaca  
1680  
agggatgcct gggctgactg ggcagaggaa cctctagctc tgactgtcac tcggctctcc  
1740  
ctaccattt ggctctggaa gctgcttggc cccccagat cagggcctgg gtgaactccc  
1800  
tggaccttcc ctagccagcc gcacagtcta ggcccttgtg ggggaagaa tggagggagg  
1860  
agcaggctag gaagacgggg ccaccacct ctccttgctt tcagcccttc ccacaggaaa  
1920  
catcaagaag cccagccag gaggggccag gctgccaagg cggctcccct gtttatctag  
1980  
agccttcgtt cctggccata ccccgactg ccctcctgtg cctgatgtcc ccagctgggg  
2040  
tcagtctcaa caggagccag tcttctggag cctctgggca gaacctcca tcagagtggg  
2100  
aatcagacgg gacccctgc agcttccctg accacgccac tgaccagcta tctggggaag  
2160  
tttactgtga aggggtttct gcctttagca atggggttca ctaagggggt tcccgaggcc  
2220  
cagggccaag gcactccac cgcctacctt agcacagggt ctctgcagga ctgcgggagc  
2280  
cagcgtcct gccgccctc ttgcccctca gaccttgcac ccacagaagc acaaccagc  
2340  
caaacaccac agccttctcc agagccggca ctgtcccggc aaccaggggt gcccaggct  
2400  
agctcttcta cctctggggc accacggact ccccttggcc actcttggga ctttgggtcca  
2460  
cgtcctgagc cactgaccac ggccagtctc tctttttata tgtgcagaaa agtggtttta  
2520  
cacaaacttt etcatggttt gtaggtattt ttttataacc ccagtgtga ggagaaagga  
2580



ggggcagtgg cttccccggc agcagcccca tgatggctga atccgaaatc ctcgatgggt  
2640  
ccagcttgat gtctttgcag ctgcacctat gggaagaagt agtcctctct tccttctcct  
2700  
cttcagcttt ttaaaaacag tcctcagagg atccatgatc cccagcactg tcccatcctc  
2760  
caciaaggcc cacaggcatg cctgtactct ctttcattaa ggtcttgaag tcaggctgcc  
2820  
ccctccccag cccccagttc tctccccacc ccctcacccc acccggggct cactcagcct  
2880  
ggcagaggaa gaaggaaggc agacatctcc gcagccactc ctgggccttt tatgtgccga  
2940  
gttaccacac ttgccttggg cgtgtccact gagccttccc cagccagtct tgttctcaat  
3000  
tttgttttgt tttgttttgt tttgagacgg agtcttctc tgntcaccca ggctggagtg  
3060  
ctatggctcg atcttggtc actgcaacct ccacctccca ggttcaagca attctcttgc  
3120  
cccagcctcc cgagtagctg ggattacagg tgcattccac catggctggc taatttttgt  
3180  
atttttagta gagatggggg ttcaccatat tggtcaggct gatctggaac tcctgacctc  
3240  
aggtgatcca cctgcctcag cctcccaaag tgctgggatt acaggcgtga gcaatcgtgc  
3300  
ccagccttgt tcttaatttt gtatcatcca gtcactgcta atattacacg caccttctca  
3360  
cttaatcctc acgacaagcc tgtgaggcag atgctcattg tcccatctt gatgaaactt  
3420  
gagtctcagg gaagtgaagt gacttgccca gggtcactca ggtagagttg agattcaaac  
3480  
ccacatgtgg ctccaaagtc tgcattctga tttgggggtg ttttttggca tggcacctc  
3540  
acctctctcc ctgcctgttt tccccaaagt ggaaaggaag gcctttcaaa ccagagtgtc  
3600  
tactccccct ctgacctcca gaccagatgg ggcatgagcc agccagctca gccaggctcc  
3660  
ctgtgtcctg ggaggaagtg tccccatccc ccatgcccct tatggggagg gagggcgtct  
3720  
gatgtctct ctctgcctcc cccccatcct gtcaggcaca ggtgacgggg gcagcccatg  
3780  
cgagcccttc tcctgtgtct ctgggagggc cagttccaca ttgagccagc ctgggtcccat  
3840  
ggaaaatgat ggctggggt ttctgaggcc ttatctgatg cctctgcagt tcatgtcccc  
3900  
caccaggcct cgaggctcag ggtgggagag ggccccgggc tgccctgtca ctctctaac  
3960  
acttccctcc cctgtcccca acatgccctg taataaaatt agagaagact aactagagtg  
4020  
gttctaagt cttttccttt gagtggcatg ttgctcagct ccgtccttcc atgggggtggc  
4080  
tccctcttgg ggcagagttg agctggaatg ctttcaggta ctatcttacc tatcgaaggc  
4140  
ttgagtgact tgcccaaat aagttttacg atagaacaag tggtaggact tactgttttg  
4200

agaatctggt gctctctggt gagagagatc t  
4231

<210> 5320

<211> 96

<212> PRT

<213> Homo sapiens

<400> 5320

Met	Cys	Arg	Val	Thr	Pro	Leu	Ala	Leu	Gly	Val	Ser	Thr	Glu	Pro	Ser
1				5					10					15	
Pro	Ala	Ser	Leu	Val	Leu	Asn	Phe	Val	Leu	Phe	Cys	Phe	Val	Leu	Arg
			20					25					30		
Arg	Ser	Leu	Ala	Leu	Xaa	Thr	Gln	Ala	Gly	Val	Leu	Trp	Leu	Asp	Leu
		35					40					45			
Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Arg	Phe	Lys	Gln	Phe	Ser	Cys	Pro
	50					55					60				
Ser	Leu	Pro	Ser	Ser	Trp	Asp	Tyr	Arg	Cys	Met	Pro	Pro	Trp	Leu	Ala
65					70				75					80	
Asn	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Ser	Pro	Tyr	Trp	Ser	Gly
			85						90					95	

<210> 5321

<211> 6324

<212> DNA

<213> Homo sapiens

<400> 5321

ntccggaggc ccgagccgac cctggggcgt ccggtccggt ggtcttacag cctccaaacc  
60  
ccgagtgcta taccgaactg cgcgccaagg gtgggagagc tgacggcctg ggccaccctt  
120  
cttccttcac tgggcaggct ttgaggtgct tgtcggctctg gactgatgaa aatccatattg  
180  
acctgaaaga tgtctgaaaa ttccagtac agtgattcat cttgtggttg gactgtcatc  
240  
agtcattgagg ggtcagatat agaaatgttg aattctgtga cccccactga cagctgtgag  
300  
cccggcccag aatgttcacc tttagagcaa gaggagcttc aagcattgca gatagagcga  
360  
ggagaaagca gccaaaatgg cacagtgctt atggaagaaa ctgcttatcc agctttggag  
420  
gaaaccagct caacaattga ggcagaggaa caaaagatac ccgaagacag tatctatatt  
480  
ggaactgcca gtgatgattc tgatattgtt acccttgagc cacctaagtt agaagaaatt  
540  
ggaaatcaag aagttgtcat tggtgaagaa gcacagagtt cagaagactt taacatgggc  
600  
tcttctcta gcagccagta tactttctgt cagccagaaa ctgtattttc atctcagcct  
660  
agtgatgatg aatcaagtag tgatgaaacc agtaatcagc ccagtcctgc ctttagacga  
720  
cgccgtgcta ggaagaagac cgtttctgct tcagaatctg aagaccggct agttgctgaa  
780

caagaaactg aaccttctaa ggagttgagt aaacgtcagt tcagtagtgg tctcaataag  
840  
tgtgttatac ttgctttggt gattgcaatc agcatgggat ttggccattt ctatggcaca  
900  
attcagattc agaagcgtca acagttagtc agaaagatac atgaagatga attgaatgat  
960  
atgaaggatt atctttccca gtgtcaacag gaacaagaat cttttataga ttataagtca  
1020  
ttgaaagaaa atcttgcaag gtgttggaac cttactgaag cagagaagat gtcctttgaa  
1080  
actcagaaaa cgaaccttgc tacagaaaaat cagtatttaa gagtatccct ggagaaggaa  
1140  
gaaaaagcct tatectcatt acaggaagag ttaaacaac taagagaaca gattagaata  
1200  
ttggaagata aagggaacag tactgaatta gttaaagaaa atcagaaact taagcagcat  
1260  
ttggaagagg aaaagcagaa aaaacacagc tttcttagtc aaaggagac tctgttgaca  
1320  
gaagcaaaga tgctaaagag agaactggag agagaacgac tagtaactac ggctttaagg  
1380  
ggggaactcc agcagttaag tggtagtcag ttacatggca agtcagattc tcccaatgta  
1440  
tatactgaaa aaaaggaaat agcaatctta cgggaaagac tcaactgagct ggaacggaag  
1500  
ctaacttcg aacagcagcg ttctgatttg tgggaaagat tgtatgttga ggcaaaagat  
1560  
caaatggaa aacaaggaac agatggaaaa aagaaagggg gcagaggaag ccacagggct  
1620  
aaaaataagt caaaggaaac atttttgggt tcagttaagg aaacatttga tgccatgaag  
1680  
aattctacca aggagtttgt aaggcatcat aaagagaaaa ttaagcaggc taaagaagct  
1740  
gtgaaggaaa atctgaaaaa attctcagat tcagttaaata ccactttcag acactttaaa  
1800  
gataccacca agaatatctt tgatgaaaag ggtaataaaa gatttggtgc tacaaaagaa  
1860  
gcagctgaaa aaccaagaac agtttttagt gactatttac atccacagta taaggcacct  
1920  
acagaaaacc atcataatag gccctactat gcaaaatgat ggaaggaaga aaagccagtt  
1980  
cacttttaaag aattcagaaa aaatacaaat tcaaagaaat gcagtcctgg gcatgattgt  
2040  
agagaaaatt ctcatctctt cagaaaggct tgttctgggtg tatttgattg tgctcaacaa  
2100  
gagtcacatga gcctttttta cacagtgggtg aatcctataa ggatggatga atttagacag  
2160  
ataattcaaa ggtacatgtt aaaagaactg gatacttttt gtcactggaa cgaacttgat  
2220  
cagttcatca ataagttttt cctaaacggg gtcttttatac atgatcagaa gctcttcact  
2280  
gactttgtta atgatgttaa agattatctt agaaacatga aggaatatga agtagataat  
2340  
gatggagtat ttgagaagtt ggatgaatat atatatagac acttctttgg tcacactttt  
2400

tccccctccat atggacccag gtcgggtttac ataaaaccgt gtcattacag tagtttgtaa  
2460  
catttgtaga ttggatagca tttttatgat ttgatgagtt tcttgtaagg ttaccgtttc  
2520  
taagagttgt gctttatggc cactgagaga attcagaata aattgaaaga tggagtctaa  
2580  
aaattattag ctgttacaaa tggaacattt cattataacg tgatcacttt gacttgagca  
2640  
aatgggttaa tttttatctt aaaaatcagt taagaatata taaaatccta ctttggccaa  
2700  
gtttgtttct tttcattata gtttatatga aaagatcacc ttaagtgaat ttattttcct  
2760  
ttaatctttt atgtatttat tcacttttgg aagctaggaa tgagcaacac aaattttact  
2820  
ctgaagtcag aagagctcat atataataat tctaattgtc cacctatttt cacttgacca  
2880  
ttccatgtac cagcttagtt atgatactta gtcacataat tatctttgat aaaggtagag  
2940  
gcacaaagag gcaaactaag caagtcaaat tctaattgtg gtacttcata ataatttttt  
3000  
atccattttc atctttatat tctgtaacat gaaacttacc taatcttcaa atgttagctt  
3060  
cattttttac ctttgaaata cttaatcttt ctgaataaat ataattgtgtc tataaaataa  
3120  
tgagactgat tctgggtgtc ttagttatta agctgggtatc tagtcctata atgaacaaag  
3180  
gtgaagctgc cttgaggaga caagtgaata atttttgctt caaaggagct cacaagctaa  
3240  
gtaataaat gaaattaagg tatggggcat ggtggcctca ggctgtctgg aggtgtttgg  
3300  
aaaggcttct tgagttaggt ggcctttgaa ctgaacttag tttttaagt agcttttggg  
3360  
agagaaatga ggatttgcta tgcagacagg gaagggaatt tcacttaaaa ggaaggctcat  
3420  
ttggagatgt gaagatacac tgctttaagg aagcagggtg gagctggagg ataagagatg  
3480  
cagaccatga agggcccat tttatgctaa aggttttgtc ctgtaggaca tggagaactt  
3540  
ctgaagaatt ttcaaggcgg gtgggataag attatattgt attttagatt acagtagtcc  
3600  
ccccttatct tcaggatata tgttccaaga ccccagtggt atgctggaaa ccagggatag  
3660  
aacataattc tatatatact atgcatgaat ttctttttcc ttctttacaa tctcacacat  
3720  
aggtttggtc ttactataga tcttaccat ctctcactat tttatttctc ttgagaacct  
3780  
tcaccctttc acttaaagga ggcgctttat agcttctctt tggcatatcc aaatgccagc  
3840  
atcactgttg tattttgggg tcattattaa gttacttaat catccttaat ccttatctta  
3900  
gggatacttg aacacaaaca ctgtggtagg ataacagtat atctgattaa cagactgcta  
3960  
ctaggtgatt aatgggtggg tagtgtaaata acacaagaaa aggatgattc acatcccatg  
4020

tgggatggag cagaactgca ttatttcatt acattactca gaacaggcat ataattgaaa  
4080  
acttatgaat tttttttttt ttaattattt gagatggaat cttgctttgt cagccaggct  
4140  
ggagtgcagt gacacgatct cagctcactg caacctctgt ctctggggtt cagggtgattc  
4200  
tcctccctag tctcccaagt agctgggact atagggcacg tgccaccaca cccggcta  
4260  
tttcatattt ttagtagaga tggggtttca ccatgttggc caggctgttc ttgaaatcct  
4320  
gacctcaagt gatccacaca tgtctacctc ccaaagtgt gggattacag tcgtgagcca  
4380  
ctgtaccccg cctaaaactg atgaattatt tctgaaattt tctatttaac attttcagac  
4440  
cacagttgac cacaggtaac ggaaacctca atcacagaaa gtaaagccgt ggatacgggtg  
4500  
ggactaatgt attggtagca gcctagagga ttgatgggaa aggtatgaag ctagaagggtg  
4560  
gtcaatataa tacagacatg agctgatgaa catctaaact gggactatac tagtaggaga  
4620  
ggaaaggaaa aaacatttgg aaaatagtaa cattgatatt tcttgtgaag gagaagtaga  
4680  
aagtaacagt gacttctaga tttctgggtt gggcatctg ttgttgata gtagtaccac  
4740  
tgagataggg aattcaaggt ttggggcaag ggtaattgga gatgagaatt gtgtttggag  
4800  
gtaactactg acattcaagt ggagagggtt agttggcagt tagttctatg gtcactctct  
4860  
ttgccgagac tgtatattta tcagactcct gggagaacac caacatccat ggggttgtag  
4920  
ggaaggctaa ggacaagagt ggggagtggg accttgaaaa tccaaaagcc atctcaagta  
4980  
aaaggaataa atgtgtcatg ctttttaaaa agttgatgtg cggaaaatgt tttcttggct  
5040  
tggaaactgg gcggccaggg gatgacagta tggacttcca gtgaagtagt gacggaagcc  
5100  
tgatcataga cattaaggaa agcgggtgtag gtgttgtag cttttgctgt aagaaaaagt  
5160  
tgagactttt gttttgcttt gtttgtgaga gatgtgtatg tatttctgct gagtgataaa  
5220  
gccagcgggg agggactgat ttttatagga aaggaggaaa aataatggaa acacatctca  
5280  
ttattttatt gtcacatttc ttttcttctg tatcttttga gtgtttccct tttttgccag  
5340  
tagagttatt gtctattttt tctttctata ggacaaaaaa actaatacag actcctttat  
5400  
ttttatatgg atatactagg attgtaattc agatatttaa tatcttttat cagtgttcag  
5460  
atcatagatt aatggagaaa acatttaaaa ttgtttttaa tttaaataca ttgaactcta  
5520  
acatagatga aaaatgtgtt tactgcttct agtcgacctg ataaaaagca acgtatggta  
5580  
aatattgaaa actccaggca tcgaaaacaa gagcagaagc accttcagcc acagccttat  
5640

aaaaggggaag gtaaattggca taaatatgggt cgcactaatg gaagacaaat ggcaaattctt  
 5700  
 gaaatagaat tggggcaatt accttttgat cctcaatact gattcacaat tgagttaaatt  
 5760  
 tagacaactg taagagaaaa atttatgctt tgtataatgt ttggtattga aactaatgaa  
 5820  
 attaccaaga tgacaatgtc ttttcttttg tttctaagta tcagtttgat aactttatat  
 5880  
 tattcctcag aagcattagt taaaagtcta ctaacctgca ttttctgta gtttagcttc  
 5940  
 gttgaatttt ttttgacact ggaaatgttc aactgtagtt ttattaagga agccaggcat  
 6000  
 gcaacagatt ttgtgcatga aatgagactt cctttcagtg taagagctta aagcaagctc  
 6060  
 agtcatacat gacaaagtgt aattaacact gatgtttgtg ttaaatttgc agcagagctt  
 6120  
 gagaaaagta cattgttctg gaatttcac ctaaacattt tataatctta cactcacttc  
 6180  
 ttgtcttttt gtgggttcaa gagccctctg acttgtgaag aatttgctgc cctcttaaga  
 6240  
 gcttgctgac ttgttttctt gtgaaatttt ttgcacatct gaatatcgtg gaagaaacaa  
 6300  
 taaaactaca ccatgaggaa aact  
 6324

<210> 5322

<211> 209

<212> PRT

<213> Homo sapiens

<400> 5322

Met	Leu	Lys	Arg	Glu	Leu	Glu	Arg	Glu	Arg	Leu	Val	Thr	Thr	Ala	Leu
1				5					10					15	
Arg	Gly	Glu	Leu	Gln	Gln	Leu	Ser	Gly	Ser	Gln	Leu	His	Gly	Lys	Ser
			20					25					30		
Asp	Ser	Pro	Asn	Val	Tyr	Thr	Glu	Lys	Lys	Glu	Ile	Ala	Ile	Leu	Arg
			35				40					45			
Glu	Arg	Leu	Thr	Glu	Leu	Glu	Arg	Lys	Leu	Thr	Phe	Glu	Gln	Gln	Arg
			50			55				60					
Ser	Asp	Leu	Trp	Glu	Arg	Leu	Tyr	Val	Glu	Ala	Lys	Asp	Gln	Asn	Gly
65				70					75					80	
Lys	Gln	Gly	Thr	Asp	Gly	Lys	Lys	Lys	Gly	Gly	Arg	Gly	Ser	His	Arg
			85					90						95	
Ala	Lys	Asn	Lys	Ser	Lys	Glu	Thr	Phe	Leu	Gly	Ser	Val	Lys	Glu	Thr
			100					105					110		
Phe	Asp	Ala	Met	Lys	Asn	Ser	Thr	Lys	Glu	Phe	Val	Arg	His	His	Lys
			115				120					125			
Glu	Lys	Ile	Lys	Gln	Ala	Lys	Glu	Ala	Val	Lys	Glu	Asn	Leu	Lys	Lys
			130			135				140					
Phe	Ser	Asp	Ser	Val	Lys	Ser	Thr	Phe	Arg	His	Phe	Lys	Asp	Thr	Thr
145				150					155					160	
Lys	Asn	Ile	Phe	Asp	Glu	Lys	Gly	Asn	Lys	Arg	Phe	Gly	Ala	Thr	Lys
			165					170						175	
Glu	Ala	Ala	Glu	Lys	Pro	Arg	Thr	Val	Phe	Ser	Asp	Tyr	Leu	His	Pro

	180		185		190
Gln Tyr Lys Ala Pro Thr Glu Asn His His Asn Arg Pro Tyr Tyr Ala					
	195		200		205
Lys					

<210> 5323  
 <211> 475  
 <212> DNA  
 <213> Homo sapiens

<400> 5323  
 gcgcgcccag ggtctggcag acacgaaaca gccaggagct gtggcaacat aactgcatgc  
 60  
 tgactggccc gcctcagtga tgccaggccc actgacagca gcagagagcg aggggcagtc  
 120  
 catagctgcc aggcctttct gcccacacca cgccacttat atggcctcct gccatgggca  
 180  
 gagtagggag gtgaggtgct cgtggtgccc agagtcctca tcaaggagtg aaaccagagt  
 240  
 gtggccatag ccagtaagaa cagcacgctg cagcccagcc catcagcctc aggcactgag  
 300  
 ctctctgcac actccatgaa tgcagagcag catcaggctg gcctcagccc cttcccgtct  
 360  
 taggccagcc ccaaggggtgc tgtggttctt cgggatgcc gagctcccc aagctgtggc  
 420  
 tgtgcctggc tgggaccttt cccctcctg ctcagggaag tttcccaccc ccggg  
 475

<210> 5324  
 <211> 105  
 <212> PRT  
 <213> Homo sapiens

<400> 5324  
 Met Glu Cys Ala Glu Ser Ser Val Pro Glu Ala Asp Gly Leu Gly Cys  
 1 5 10 15  
 Ser Val Leu Phe Leu Leu Ala Met Ala Thr Leu Trp Phe His Ser Leu  
 20 25 30  
 Met Arg Thr Leu Gly Thr Thr Ser Thr Ser Pro Pro Tyr Ser Ala His  
 35 40 45  
 Gly Arg Arg Pro Tyr Lys Trp Arg Gly Val Gly Arg Lys Ala Trp Gln  
 50 55 60  
 Leu Trp Thr Ala Pro Arg Ser Leu Leu Leu Ser Val Gly Leu Ala Ser  
 65 70 75 80  
 Leu Arg Arg Ala Ser Gln His Ala Val Met Leu Pro Gln Leu Leu Ala  
 85 90 95  
 Val Ser Cys Leu Pro Asp Pro Gly Arg  
 100 105

<210> 5325  
 <211> 938  
 <212> DNA  
 <213> Homo sapiens

&lt;400&gt; 5325

gccggcgccg ccggttaaag tgccgcgggg caggggcccg gccgcggcca cccgtcctc  
60  
ccgctccggt cccgactgtc gggctctcgg ccgagtcgcc ccggacaatc acaaagagt  
120  
tgtaggccag ccccggtcac agagtgcacc gtatcctgtc acttctggat gtgagggaga  
180  
agtgagtcac ctcatcccc tccgtggatc agaggacttg gactagatag aagcatgtg  
240  
tgtctcctac gaggcctggg ccggcctgga gccctggcac ggggagccct ggggcagcag  
300  
caatccctgg gtgcccgggc cctggccagc gcaggctctg agagccggga cgagtacagc  
360  
tatgtggtgg tgggcgcggg ctccggcggg tgcgtgctgg ctgggaggct cacggaggac  
420  
cccgcgagc gcgtgctgct gctggaggcc gggcccaagg acgtgcgcgc ggggagcaag  
480  
cggctctcgt ggaagatcca catgcccgcg gccctggtgg ccaacctgtg cgacgacagg  
540  
tacaactggt gctaccacac agaggtgcag cggggcctgg acggccgcgt gctgtactgg  
600  
ccacgcggcc gcgtctgggg tggctcctca tccctcaatg ccatggtcta cgtccgtggg  
660  
cacgccgagg actacgagcg ctggcagcgc cagggcgccc gcggctggga ctacgcgcac  
720  
tgcctgccct acttccgcaa ggcgcagggc cacngagctg ggcgccagcc ggtaccgggg  
780  
cgcgatggcc cgctgcgggt gtcccggggc aagaccaacc acccgctgca ctgcgcattc  
840  
ctggaggcca cgcagcaggc cggctacccg ctcaccgagg acatgaatgg cttccagcag  
900  
gagggcttcg gctggatgga catgaccatc catgaagg  
938

&lt;210&gt; 5326

&lt;211&gt; 234

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5326

Met	Trp	Cys	Leu	Leu	Arg	Gly	Leu	Gly	Arg	Pro	Gly	Ala	Leu	Ala	Arg
1				5					10					15	
Gly	Ala	Leu	Gly	Gln	Gln	Gln	Ser	Leu	Gly	Ala	Arg	Ala	Leu	Ala	Ser
			20					25					30		
Ala	Gly	Ser	Glu	Ser	Arg	Asp	Glu	Tyr	Ser	Tyr	Val	Val	Val	Gly	Ala
			35				40					45			
Gly	Ser	Ala	Gly	Cys	Val	Leu	Ala	Gly	Arg	Leu	Thr	Glu	Asp	Pro	Ala
	50					55				60					
Glu	Arg	Val	Leu	Leu	Leu	Glu	Ala	Gly	Pro	Lys	Asp	Val	Arg	Ala	Gly
65				70					75					80	
Ser	Lys	Arg	Leu	Ser	Trp	Lys	Ile	His	Met	Pro	Ala	Ala	Leu	Val	Ala
			85					90					95		
Asn	Leu	Cys	Asp	Asp	Arg	Tyr	Asn	Trp	Cys	Tyr	His	Thr	Glu	Val	Gln



	100		105		110										
Arg	Gly	Leu	Asp	Gly	Arg	Val	Leu	Tyr	Trp	Pro	Arg	Gly	Arg	Val	Trp
	115						120					125			
Gly	Gly	Ser	Ser	Ser	Leu	Asn	Ala	Met	Val	Tyr	Val	Arg	Gly	His	Ala
	130					135						140			
Glu	Asp	Tyr	Glu	Arg	Trp	Gln	Arg	Gln	Gly	Ala	Arg	Gly	Trp	Asp	Tyr
145					150					155					160
Ala	His	Cys	Leu	Pro	Tyr	Phe	Arg	Lys	Ala	Gln	Gly	His	Xaa	Ala	Gly
			165						170					175	
Arg	Gln	Pro	Val	Pro	Gly	Arg	Asp	Gly	Pro	Leu	Arg	Val	Ser	Arg	Gly
		180						185					190		
Lys	Thr	Asn	His	Pro	Leu	His	Cys	Ala	Phe	Leu	Glu	Ala	Thr	Gln	Gln
		195					200					205			
Ala	Gly	Tyr	Pro	Leu	Thr	Glu	Asp	Met	Asn	Gly	Phe	Gln	Gln	Glu	Gly
	210					215					220				
Phe	Gly	Trp	Met	Asp	Met	Thr	Ile	His	Glu						
225					230										

&lt;210&gt; 5327

&lt;211&gt; 2084

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5327

gagcactccg gactctacgt gaacaacaac gggatcatct ccttcctgaa ggaggtttct  
60  
cagttcaccc cagtggcctt cccattgcc aaggaccgct gcgtggtggc agccttctgg  
120  
gcagatgtgg acaaccggcg tgcaggcgac gtgtactacc gggaggccac cgaccagcc  
180  
atgctgcgcc gagccacgga ggacgtcagg cactacttcc ccgagctcct ggacttcaat  
240  
gccacctggg tttttgttgc cacctggtac cgagtgcctt tctttggagg cagttcctca  
300  
tcccctgtca acacattcca gactgtgctc atcacagacg gcaagctctc cttcaccatc  
360  
ttcaactatg agtccatcgt gtggaccaca ggcacacacg ccagcagcgg gggcaacgcc  
420  
actggcctcg ggggcacgac agcccaggct ggcttcaacg caggcgatgg gcagcgttac  
480  
ttcagtatcc ccggctcgcg cacagcagac atggccgagg tggagaccac caccaacgtg  
540  
ggtgtgcccg ggcgctgggc gttcagaatc gatgatgccc aggtgcgcgt ggggggctgc  
600  
ggccatacaa cgccgtgtg cctggccctg cgcccctgcc tcaacggcgg caagtgcac  
660  
gacgactgcy tcacgggcaa cccctcctac acctgctcct gcctctcggg cttcacgggg  
720  
cggaggtgcc acctggacgt gaacgaatgt gcctcccagc cctgtcagaa tgggtgggacc  
780  
tgtactcacg gcatcaacag tttccgctgc cagtgcccgg ctggcttttg gggaccacc  
840  
tgtgagacag cccaatcccc ctgtgacacc aaagagtgtc aacatggtgg ccagtgccag  
900

gtggagaacg gctctgcggg gtgtgtgtgc caggccggat acaccggagc agcctgcgag  
960  
atggatgtgg acgactgcag ccctgacccc tgcctgaatg gaggcctctg tgttgaccta  
1020  
gtggggaatt acacctgctt gtgtgccgag cccttcaagg gacttcgctg tgagacagga  
1080  
gaccatccag tgccacacgc ctgcctctcg gccccttgcc acaatggggg cacctgtgtg  
1140  
gatgcggaac agggctacgt gtgcgagtgc cccgaaggct tcatgggcct ggactgcagg  
1200  
gagagagtcn ncccgatgac tgtgagtgcc gcaacggagg cagatgcctg ggcgccaaca  
1260  
ccacctctg cccatgcccc ctgcggannt tctttgggct tctctgtgaa tttgaaatca  
1320  
cagccantgc cctgcaacat gaacacacag tgcccagatg ggggctactg catggagcac  
1380  
ggcgggagct acctctgcgt ctgccacacc gaccacaatg ccagccactc cctgccatca  
1440  
ccctgcgact cggacccctg cttcaacgga ggctcctgcg atgcccatac cgactcctac  
1500  
acctgcgagt gcccgcgcgg gttccacggc aagcactgcg agaaagcccg gccacacctg  
1560  
tgcagctcag ggccctgccc gaacgggggc acgtgcaagg aggcgggcgg cgagtaccac  
1620  
tgcagctgcc cctaccgctt cactgggagg cactgtgaga tcgggaagcc agactcgtgt  
1680  
gcctctggcc cctgtcacia cggcggcacc tgcttccact acattggcaa atacaagtgt  
1740  
gactgtcccc caggcttctc cggcggcac tgcgagatag cccctcccc ctgcttcggg  
1800  
agcccggtg tgaatggggg cacctgcgag gaccgggaca cggatttctt ctgccactgc  
1860  
caagcagggt acatgggacg ccgatgccag gcagaggtgg actgcggccc cccggaggag  
1920  
gtgaagcacg ccacactgcg cttcaacggc acgcggctgg gcgcgggtgg cctgtatgca  
1980  
tgtgaccgtg gctacagcct gagcgcccc agccgcatcc gggctctgcca gccacacggg  
2040  
gtctggagtg agcctcccca gtgccttggg gattctgtgg gccc  
2084

&lt;210&gt; 5328

&lt;211&gt; 694

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5328

Glu	His	Ser	Gly	Leu	Tyr	Val	Asn	Asn	Asn	Gly	Ile	Ile	Ser	Phe	Leu
1			5					10						15	
Lys	Glu	Val	Ser	Gln	Phe	Thr	Pro	Val	Ala	Phe	Pro	Ile	Ala	Lys	Asp
			20					25					30		
Arg	Cys	Val	Val	Ala	Ala	Phe	Trp	Ala	Asp	Val	Asp	Asn	Arg	Arg	Ala
		35					40					45			
Gly	Asp	Val	Tyr	Tyr	Arg	Glu	Ala	Thr	Asp	Pro	Ala	Met	Leu	Arg	Arg

4500

485 490 495  
 Asp Asp Ser Tyr Thr Cys Glu Cys Pro Arg Gly Phe His Gly Lys His  
 500 505 510  
 Cys Glu Lys Ala Arg Pro His Leu Cys Ser Ser Gly Pro Cys Arg Asn  
 515 520 525  
 Gly Gly Thr Cys Lys Glu Ala Gly Gly Glu Tyr His Cys Ser Cys Pro  
 530 535 540  
 Tyr Arg Phe Thr Gly Arg His Cys Glu Ile Gly Lys Pro Asp Ser Cys  
 545 550 555 560  
 Ala Ser Gly Pro Cys His Asn Gly Gly Thr Cys Phe His Tyr Ile Gly  
 565 570 575  
 Lys Tyr Lys Cys Asp Cys Pro Pro Gly Phe Ser Gly Arg His Cys Glu  
 580 585 590  
 Ile Ala Pro Ser Pro Cys Phe Arg Ser Pro Cys Val Asn Gly Gly Thr  
 595 600 605  
 Cys Glu Asp Arg Asp Thr Asp Phe Phe Cys His Cys Gln Ala Gly Tyr  
 610 615 620  
 Met Gly Arg Arg Cys Gln Ala Glu Val Asp Cys Gly Pro Pro Glu Glu  
 625 630 635 640  
 Val Lys His Ala Thr Leu Arg Phe Asn Gly Thr Arg Leu Gly Ala Val  
 645 650 655  
 Ala Leu Tyr Ala Cys Asp Arg Gly Tyr Ser Leu Ser Ala Pro Ser Arg  
 660 665 670  
 Ile Arg Val Cys Gln Pro His Gly Val Trp Ser Glu Pro Pro Gln Cys  
 675 680 685  
 Leu Gly Asp Ser Val Gly  
 690

&lt;210&gt; 5329

&lt;211&gt; 2582

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5329

nngggccgca acgtgtcgag agccgtaagt aaagtgtcgc aaagcagaag gaaggcggga  
 60  
 gtccccactg caaacattga ggaaagccag gcagtagagg ccgctatggc gaacgttccg  
 120  
 tgggcagagg tctgcgagaa attccaggcg gcgctcgctc tgtcgcgsgt ggaactgcat  
 180  
 aaaaatccgg agaaggaacc atacaagtcc aaatacagcg cccgggcgct actggaagag  
 240  
 gtcaaggcgc tgctcggccc tgcgcctgag gacgaggatg agcggcctga ggccgaggac  
 300  
 ggccccgggtg ccggtgacca cgccctgggg ctgccggctg aggtggtgga gcccgagggg  
 360  
 cccgtcgccc agcgagcggg gaggctggca gtcacgagt tccacctcgg ggtgaaccac  
 420  
 atcgacacgg aggagctgtc ggcggggggag gagcacctgg tgaaatgcct gcggctgctg  
 480  
 cgcaggtacc ggctctcgca cgactgcata tctctctgca tccaggcgca gaataacctg  
 540  
 ggtatcttgt ggtctgaaag agaagaaatt gaaactgcac aggttacct agagtcacca  
 600

gaagcactat ataatcagta tatgaaagag gttgggagtc ctccctcttga tcctactgag  
660  
cgttttcttc ctgaagaaga gaaacttact gaacaagaga gatcaaaaag atttgaaaag  
720  
gtttatactc ataacctata ttacctagct caagtctacc agcatctgga aatgtttgag  
780  
aaggctgctc actattgcc a tagtacacta aaacgccagc ttgagcacia tgcctaccat  
840  
cctatagagt gggctatcaa tgctgctacc ttgtcacagt ttacatcaa taagctatgc  
900  
tttatggagg ccaggcactg tttatcagct gctaattgtca tttttggtca aactggaaaag  
960  
atctcagcca cagaagacac tcctgaagct gaaggagaag tgccagagct ttatcatcaa  
1020  
agaaaggggg aaatagcaag gtgctggatc aaatactgtt tgactctcat gcagaatgcc  
1080  
caactctcca tgcaggacaa cataggagag cttgatcttg ataaacagtc tgaacttaga  
1140  
gctttaagga aaaaagaact agatgaggag gaaagcattc ggaaaaaagc tgtgcagttt  
1200  
ggaaccggtg aactgtgtga tgccatctct gcagtagaag agaaagttag ctacttgaga  
1260  
ccttttagatt ttgaagaagc cagagaactt ttcttattgg gtcagcacta tgtctttgag  
1320  
gcaaaagagt tctttcagat tgatgggttat gtcactgacc atattgaagt tgtccaagac  
1380  
cacagtgtc tgtttaaggt gcttgcatc tttgaaactg acatggagag acggtgcaag  
1440  
atgcataaac gcagaatagc catgctagag cccctaactg tagacctgaa tccacagtat  
1500  
tatctgttgg tcaacagaca gatccagttt gaaattgcac atgcttacta tgatatgatg  
1560  
gatttgaagg ttgccattgc tgacaggcta agggaccccg actcacacat tgtaaaaaaa  
1620  
ataaataatc ttaataagtc ggcactcaag tactaccagc tcttcctaga ctccctgaga  
1680  
gacccaaaca aagtctttcc tgagcacatc ggggaagacg tcctccgccc ggccatgtta  
1740  
gctaaattcc gggtagctcg tctgtatggc aaaatcatta ctgcagatcc caagaaagag  
1800  
ctggaaaatt tggcaacatc attggaacat tacaaattta ttgttgatta ctgtgaaaag  
1860  
catcctgagg ccgcccagga aatagaagtt gagctagaac ttagtaaaga gatgggttagt  
1920  
cttctcccaa caaaaatgga gagattcaga accaagatgg ccctgactta atccttggtt  
1980  
ttaagaaaag gaaatgtgca atattgaagt gatctttttc cctagtcaga caggcccaat  
2040  
tccattgtga tgtttacctt tatagccagg tgagtgcagt ttgaacttga gatacagtca  
2100  
actgagtgtt tgctaggatc ctaaggaaca taaagttaat taaaaactta cacctaatta  
2160  
tgtaaatgtc cttgttaaag acatgtgatt tgtattttag atgcttggtt cctattaaaa  
2220

tacagacatt tctaccctca gtttctaaat gtagactatt tggtggctag tacttgatag  
2280  
attccttgta agaaaaaatg ctgggtaatg tacctggtaa caagcctggt aatatattaa  
2340  
gattgaaaaa gtaacttcta tagttactcc ttctaaaata tttgacttcc tacattcccc  
2400  
ccacccaaaa tctttccctt ttgaaaatac taaaaactaa gttatgttat tataaagtgt  
2460  
aaaatgggtt gtettaatta taggagaaaa aggcttggtt agaaataaaa taaactgact  
2520  
tatttcacta atgaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaagaaaaa  
2580  
aa  
2582

<210> 5330  
<211> 308  
<212> PRT  
<213> Homo sapiens

<400> 5330  
Trp Ile Lys Tyr Cys Leu Thr Leu Met Gln Asn Ala Gln Leu Ser Met  
1 5 10 15  
Gln Asp Asn Ile Gly Glu Leu Asp Leu Asp Lys Gln Ser Glu Leu Arg  
20 25 30  
Ala Leu Arg Lys Lys Glu Leu Asp Glu Glu Glu Ser Ile Arg Lys Lys  
35 40 45  
Ala Val Gln Phe Gly Thr Gly Glu Leu Cys Asp Ala Ile Ser Ala Val  
50 55 60  
Glu Glu Lys Val Ser Tyr Leu Arg Pro Leu Asp Phe Glu Glu Ala Arg  
65 70 75 80  
Glu Leu Phe Leu Leu Gly Gln His Tyr Val Phe Glu Ala Lys Glu Phe  
85 90 95  
Phe Gln Ile Asp Gly Tyr Val Thr Asp His Ile Glu Val Val Gln Asp  
100 105 110  
His Ser Ala Leu Phe Lys Val Leu Ala Phe Phe Glu Thr Asp Met Glu  
115 120 125  
Arg Arg Cys Lys Met His Lys Arg Arg Ile Ala Met Leu Glu Pro Leu  
130 135 140  
Thr Val Asp Leu Asn Pro Gln Tyr Tyr Leu Leu Val Asn Arg Gln Ile  
145 150 155 160  
Gln Phe Glu Ile Ala His Ala Tyr Tyr Asp Met Met Asp Leu Lys Val  
165 170 175  
Ala Ile Ala Asp Arg Leu Arg Asp Pro Asp Ser His Ile Val Lys Lys  
180 185 190  
Ile Asn Asn Leu Asn Lys Ser Ala Leu Lys Tyr Tyr Gln Leu Phe Leu  
195 200 205  
Asp Ser Leu Arg Asp Pro Asn Lys Val Phe Pro Glu His Ile Gly Glu  
210 215 220  
Asp Val Leu Arg Pro Ala Met Leu Ala Lys Phe Arg Val Ala Arg Leu  
225 230 235 240  
Tyr Gly Lys Ile Ile Thr Ala Asp Pro Lys Lys Glu Leu Glu Asn Leu  
245 250 255  
Ala Thr Ser Leu Glu His Tyr Lys Phe Ile Val Asp Tyr Cys Glu Lys

260                  265                  270  
His Pro Glu Ala Ala Gln Glu Ile Glu Val Glu Leu Glu Leu Ser Lys  
                  275                  280                  285  
Glu Met Val Ser Leu Leu Pro Thr Lys Met Glu Arg Phe Arg Thr Lys  
                  290                  295                  300  
Met Ala Leu Thr  
305

<210> 5331  
<211> 1069  
<212> DNA  
<213> Homo sapiens

<400> 5331  
aaatttgcac tagagtatcg cacaaccagg gaaagggttt tgcagcagaa acagaaacgg  
60  
gcccaaccaca gagagagaaa taagaccaga gggaagatga tcaccgattc tggcaagttc  
120  
tccggcagtt ctccggcgcc cccaagccag ccgcagggtc tgagctatgc gngaggacgc  
180  
ggctgagcac gagaacatga aggctgtgct gaaaacctcg tccccctccg tggaggacgc  
240  
cacccccgcg ctgggcgtcc gcacacgcag ccgagcaagc cgnnaggatc cactagtacc  
300  
tggactatgg gaactgatga ctgcaccaat gtcacagatg atgcagctga tgagatcatg  
360  
gaccgcatcg tcaagtcagc cacccaagtg ccagtcagc gagtgggtgcc gagggagagg  
420  
aaacgatccc gggccaaccg gaaatctttg cgaagaaccc tgaagagcgg cctgacccca  
480  
gaagaagcca gagccctggg cttgggtggc acctcggagt tgcagctgtg aactcatag  
540  
gttactccca ggagtgtgct gagcagaagg caagctcttg ctggatgaaa cccctccagg  
600  
tgggggtggg gagacttgat attcacatcc aacagtttga aaaggagag ctcaattccc  
660  
agcgtcacc catggcttgt gttgcctgct acgcattgac ttggatctcc aggagtcacc  
720  
tgcacatacc ttctccatcg tgtcagctgt gtttctcttg attccgtgac acccggttta  
780  
ttagttcaaa agtgtgacac cttttctggg caaggaacag cccctttaag gagcaaatca  
840  
cttctgtcac agttattatg gtaatatgag gcaatctgat tagcttcaca gactgagtct  
900  
ccacaacacc aaaatatcca gatgtaaacc ccaaacttgt acacaaaaga aagcacagat  
960  
tgtttacctg ttgtggattt tagatgtaac aaatgtttat acaaatacat acatgtacac  
1020  
catgtttcaa atactaaata aatagagttt aatgccaaaa aaaaaaaaaa  
1069

<210> 5332  
<211> 61  
<212> PRT

<213> Homo sapiens

<400> 5332

```

Lys Phe Ala Leu Glu Tyr Arg Thr Thr Arg Glu Arg Val Leu Gln Gln
 1           5           10           15
Lys Gln Lys Arg Ala Asn His Arg Glu Arg Asn Lys Thr Arg Gly Lys
          20          25          30
Met Ile Thr Asp Ser Gly Lys Phe Ser Gly Ser Ser Pro Ala Pro Pro
          35          40          45
Ser Gln Pro Gln Gly Leu Ser Tyr Ala Xaa Gly Arg Gly
   50          55          60

```

<210> 5333

<211> 883

<212> DNA

<213> Homo sapiens

<400> 5333

```

gagccgccgg gagctgtagt tctcccgccg tcaactggaag taggcagaga gcggacctgg
60
cggccgggca gcatggcggg gctggagctc ttgtcggacc agggctaccg ggtggacggg
120
cggcgcnngc gggagctgcg caagatccag gcgcggatgg gcgtgttcgc gcaggctgac
180
ggctcggcct acattgagca gggcaacacc aaggcactgg ctgtggtcta cggcccgcac
240
gagatccggg gctcccgggc tcgagccctg ccggacaggg ccctagttaa ctgtcaatat
300
agttcagcga ccttcagcac aggtgagcgc aagcgacggc cacatgggga ccgtaagtc
360
tgtgagatgg gcctgcagct ccgccagact ttcgaagcag ccacccctac acagctgcac
420
ccacgctccc agattgatat ctatgtgcag gtgctacagg cagatggtgg gacctatgca
480
gcttgtgtga atgcagccac gctggcagtg ctggatgccg ggatacccat gagagacttt
540
gtgtgtgcgt gctcagctgg cttcgtggac ggcacagccc tggcggacct cagccatgtg
600
gaggaagcag ctggtggccc ccagctggcc ctggccctgc tgccagcctc aggacagatt
660
gcgctgcttg agatggatgc ccggctgcac gaggaccacc tggagcgggt gttggaggct
720
gctgcccagg ctgcccgaga tgtgcacacc ctcttagatc gagtgggtccg gcagcatgtg
780
cgtgaggcct ctatcttgct gggggactga ccaccagcc acccatgtcc agaataaaac
840
cctcctctgc ccacaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
883

```

<210> 5334

<211> 269

<212> PRT

<213> Homo sapiens



&lt;400&gt; 5334

Glu Pro Pro Gly Ala Val Val Leu Pro Arg Ser Leu Glu Val Gly Arg  
 1 5 10 15  
 Glu Arg Thr Trp Arg Pro Gly Ser Met Ala Gly Leu Glu Leu Leu Ser  
 20 25 30  
 Asp Gln Gly Tyr Arg Val Asp Gly Arg Arg Xaa Arg Glu Leu Arg Lys  
 35 40 45  
 Ile Gln Ala Arg Met Gly Val Phe Ala Gln Ala Asp Gly Ser Ala Tyr  
 50 55 60  
 Ile Glu Gln Gly Asn Thr Lys Ala Leu Ala Val Val Tyr Gly Pro His  
 65 70 75 80  
 Glu Ile Arg Gly Ser Arg Ala Arg Ala Leu Pro Asp Arg Ala Leu Val  
 85 90 95  
 Asn Cys Gln Tyr Ser Ser Ala Thr Phe Ser Thr Gly Glu Arg Lys Arg  
 100 105 110  
 Arg Pro His Gly Asp Arg Lys Ser Cys Glu Met Gly Leu Gln Leu Arg  
 115 120 125  
 Gln Thr Phe Glu Ala Ala Ile Leu Thr Gln Leu His Pro Arg Ser Gln  
 130 135 140  
 Ile Asp Ile Tyr Val Gln Val Leu Gln Ala Asp Gly Gly Thr Tyr Ala  
 145 150 155 160  
 Ala Cys Val Asn Ala Ala Thr Leu Ala Val Leu Asp Ala Gly Ile Pro  
 165 170 175  
 Met Arg Asp Phe Val Cys Ala Cys Ser Ala Gly Phe Val Asp Gly Thr  
 180 185 190  
 Ala Leu Ala Asp Leu Ser His Val Glu Glu Ala Ala Gly Gly Pro Gln  
 195 200 205  
 Leu Ala Leu Ala Leu Leu Pro Ala Ser Gly Gln Ile Ala Leu Leu Glu  
 210 215 220  
 Met Asp Ala Arg Leu His Glu Asp His Leu Glu Arg Val Leu Glu Ala  
 225 230 235 240  
 Ala Ala Gln Ala Ala Arg Asp Val His Thr Leu Leu Asp Arg Val Val  
 245 250 255  
 Arg Gln His Val Arg Glu Ala Ser Ile Leu Leu Gly Asp  
 260 265

&lt;210&gt; 5335

&lt;211&gt; 4282

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5335

gccg gatcgg cggagggggcc gggccaggga gcctcagccc cgccggcagc cctaaggcga  
 60  
 aggt aaccgc cacgggggtcc ccgtcgcgac cccctccctc ccggagctcc cgtccccggg  
 120  
 atcccaagct ccgccccgcc gacccccgtc tcccctggac cccgggtcta gcctgacgag  
 180  
 atccccaacc tcctgaggtg ctctggcccc ggattctccc gggctgcatt ctctgctcct  
 240  
 cctcgctgc gaagcatcac gtccgcttcc cgacgctgag ggcagccccg tccagggcag  
 300  
 tggctctgcc aatgatcctg tgagtattca ggaatcactg ttgcccctgg ggatccttgt  
 360

cctggagtgg cccacctgct tgccccagc atggcgccg acactcccg gtcgctgatg  
420  
gccctctgta ctgacttctg cttgcgcaac ctggatggca ccctgggcta cctgctggac  
480  
aaggagaccc tgcggctaca tccggacatc ttcttgccca gcgagatctg tgaccggctc  
540  
gtcaatgagt atgtggagct ggtgaacgct gcctgtaact tcgagccaca cgagagcttc  
600  
ttcagcctct tttcggaccc ccgcagcacc cgcctcacgc ggatccacct ccgtgaggac  
660  
ctggtgcagg accaggacct ggaggccatc cgcaagcagg acctggtgga gctgtacctg  
720  
actaactgcg agaagctgtc cgccaagagc ctgcagacac tgaggagctt cagccacacc  
780  
ctggtgtcct tgagcctctt cggtgtaca aacattttct atgaggagga gaaccaggga  
840  
ggctgtgaag atgagtacct cgtcaacccc acctgccagg tgctgggtaa ggatttcacc  
900  
ttcagagggt tcagccgct ccgcttcctc aacttgggccc gcatgattga ttgggtccct  
960  
gtggagtccc tgctgcggcc gcttaactcc ctggctgcct tggacctctc aggcattcag  
1020  
acgagcgacg cagccttctt caccagtgga aaagacagcc tgggtgtccct cgtcctctac  
1080  
aacatggacc tgtccgacga ccacatccgg gtcacgtgc agctgcacaa gctgcgacac  
1140  
ctggacatct cccgagaccg cctctccagc tactacaagt tcaagctgac tcgggaggtg  
1200  
ctgagcctct ttgtgcagaa gctggggaac ctaatgtccc tggacatctc tggccacatg  
1260  
atcctagaga actgcagcat ctccaagatg gaagaggaag cggggcagac cagcattgag  
1320  
ccttccaaga gcagcatcat acctttccgg gctctgaaga ggccgctgca gttcctcggg  
1380  
ctctttgaga actctctgtg ccgcctcacg cacattccag cctacaaagt aagtggtagc  
1440  
aaaaacgaag agcagggtgt gaatgccatc gaggcctaca cggagcaccg gcctgagatc  
1500  
acctcgcggg ccatcaactt gctttttgac atcgcccgca tcgagcggtg caaccagctg  
1560  
ctgcggggccc tgaagctggt catcacggcc ctcaagtgcc acaaatatga caggaacatt  
1620  
caagtgcag gcagcgccg tctctttctac ctaacaaatt ccgagtaccg ctcagagcag  
1680  
agtgtgaagc tgcgcccggc gggtatccag gtggtgctga atggcatgga atcctaccag  
1740  
gaggtgacgg tgcagcgga ctgctgcctg acgctctgca acttcagcat ccccgaggag  
1800  
ctggaattcc agtaccgccc ggtcaacgag ctctgctca gcacctcaa cccacgcgg  
1860  
caggacgagt ctatccagcg gatcgccgtg cacctgtgca atgccctggt ctgccaggta  
1920  
gacaacgacc acaaggaggc cgtgggcaag atgggctttg tcgtgacct gctgaagctg  
1980

attcagaaga agctgctgga caagacatgt gaccaggtca tggagttctc ctggagtgcc  
2040  
ctgtggaaca tcacagatga aactcctgac aactgcgaga tgttcctcaa tttcaacggc  
2100  
atgaagctct tcctggactg cctgaaggaa ttcccagaga agcaggaact gcataggaat  
2160  
atgctaggac ttttggggaa tgtggcagaa gtgaaggagc tgaggcctca actaatgact  
2220  
tcccagttca tcagcgtctt cagcaacctg ttggagagca aggccgatgg gatcgagggt  
2280  
tcctacaatg cctgcggcgt cctctccac atcatgtttg atggaccga ggcctggggc  
2340  
gtctgtgagc cccagcgtga ggaggtggag gaacgcatgt gggctgccat ccagagctgg  
2400  
gacataaact ctcgagaaa catcaattac aggtcatttg aaccaattct ccgcctcctt  
2460  
ccccaggaa tctctcctgt cagccagcac tgggcaacct gggccctgta taacctcgtg  
2520  
tctgtctacc cggacaagta ctgccctctg ctgatcaaag aaggggggat gccccttctg  
2580  
agggacataa ttaagatggc gaccgcacgg caggagacca aggaaatggc ccgcaagggtg  
2640  
attgagcact gcagtaactt taaagaggag aacatggaca cgtctagata gaggcctccg  
2700  
tccccatggc cgccaccgct ctggaccaca ggcggggagg aagcatgctc aagcagccca  
2760  
gcgggcgggc cccttccgag ggagcctccc acggagtga gagacatggg ggacttttgc  
2820  
acaaccgacg cttttcctta atgttagtga gatatatata tattatatat atatattttt  
2880  
tttttgggta ggaagtgtga agttttgtgt gtatgatttc tgtgcaaaaa caaaagcaac  
2940  
actcctgagt ccttgcagct tccttggcca ttctcaaacc cactcagcct tcatcgctga  
3000  
cacacacact cctaccccaa ccagactaaa tgcctataac gctgtgagtg tccagtcctt  
3060  
gtccaggaaa ctcatatccc ggcctggctt ctttcatga gaggagcagg ccttggacag  
3120  
cgtatcgagc atcctgacct actgcccctg cctgagaacg ccattcttggc tcccgggcac  
3180  
agctgatggg gtttggggat tagaacttac cccactgggt ctcccaaaag ccttgggtgt  
3240  
cccggctgtg ggccatctgg ggcaggaaaag tgagccattc ctaggctgag gtccaggcag  
3300  
ccctgcccct gaagaccctc taggagcagg gcacccagtg gccctgctgc tgtccagcca  
3360  
ggcctgcctg aggccacgct gctatggagg ctgcctccta gtctcccacc aggtcccagg  
3420  
ctgtggaaaag cccagccca gggatggtca gaactcgggg gcagattcca ctgccccttc  
3480  
tgccaaacac atccagaacc tgccctcagc cctggaagct agcatcttct ggggccaggg  
3540  
gcttgcttcc tcgtccata gccctcaact gccaggcgc tcccaccagc agaactgagc  
3600

ctgcctcttc ctcccagcct gccccgctgc ccagaggacc ccacgcctct cagaggcaga  
 3660  
 ggtcccatgc cagcctttga cccacaacgg ccacacagcc gcctccagac cagcactcgg  
 3720  
 actgccctgc agtggccgct tgggcctccc tggcggtccc gccctgccct aggctttacc  
 3780  
 ttggaagcct gagaggcgcc ggctctcttg ctctccatc gatggacact gcattgcttc  
 3840  
 tcacggaca cttgtggagc gcaggggcct ggggagcagc gctaaccctg gaggcagcct  
 3900  
 ttgggtgatg gctttttctt cccttttctt cccgcgggccc tgttttcagg tgttcctagc  
 3960  
 atttctgcct ccaggcagga cggcaggggt gaggagcttt gggagagaca cctggccttt  
 4020  
 ttctctgga gcctctccct cccggccctg ggaagtgggc gcagccctgt gttccccag  
 4080  
 cttggcagat gggctgcctg cggcgctccc ttccttccca cgctcagcgg ccccggccag  
 4140  
 accctggcag acttcacacc tcattgcttt accccctggg gcctggggaa atgtctgtac  
 4200  
 tttgggaagt cacagaaata catttttgtg caaatggaa aaaaaaaaaa aaaaaaaaaa  
 4260  
 aaaaaaaaaa aaaaaaaaaa aa  
 4282

<210> 5336  
 <211> 766  
 <212> PRT  
 <213> Homo sapiens

<400> 5336  
 Met Ala Ser Asp Thr Pro Glu Ser Leu Met Ala Leu Cys Thr Asp Phe  
 1 5 10 15  
 Cys Leu Arg Asn Leu Asp Gly Thr Leu Gly Tyr Leu Leu Asp Lys Glu  
 20 25 30  
 Thr Leu Arg Leu His Pro Asp Ile Phe Leu Pro Ser Glu Ile Cys Asp  
 35 40 45  
 Arg Leu Val Asn Glu Tyr Val Glu Leu Val Asn Ala Ala Cys Asn Phe  
 50 55 60  
 Glu Pro His Glu Ser Phe Phe Ser Leu Phe Ser Asp Pro Arg Ser Thr  
 65 70 75 80  
 Arg Leu Thr Arg Ile His Leu Arg Glu Asp Leu Val Gln Asp Gln Asp  
 85 90 95  
 Leu Glu Ala Ile Arg Lys Gln Asp Leu Val Glu Leu Tyr Leu Thr Asn  
 100 105 110  
 Cys Glu Lys Leu Ser Ala Lys Ser Leu Gln Thr Leu Arg Ser Phe Ser  
 115 120 125  
 His Thr Leu Val Ser Leu Ser Leu Phe Gly Cys Thr Asn Ile Phe Tyr  
 130 135 140  
 Glu Glu Glu Asn Pro Gly Gly Cys Glu Asp Glu Tyr Leu Val Asn Pro  
 145 150 155 160  
 Thr Cys Gln Val Leu Val Lys Asp Phe Thr Phe Glu Gly Phe Ser Arg  
 165 170 175  
 Leu Arg Phe Leu Asn Leu Gly Arg Met Ile Asp Trp Val Pro Val Glu

[illegible]

610	615	620
Ala Asp Gly Ile Glu Val Ser Tyr Asn Ala Cys Gly Val Leu Ser His		
625	630	635
Ile Met Phe Asp Gly Pro Glu Ala Trp Gly Val Cys Glu Pro Gln Arg		640
	645	650
Glu Glu Val Glu Glu Arg Met Trp Ala Ala Ile Gln Ser Trp Asp Ile		655
	660	665
Asn Ser Arg Arg Asn Ile Asn Tyr Arg Ser Phe Glu Pro Ile Leu Arg		670
	675	680
Leu Leu Pro Gln Gly Ile Ser Pro Val Ser Gln His Trp Ala Thr Trp		685
	690	695
Ala Leu Tyr Asn Leu Val Ser Val Tyr Pro Asp Lys Tyr Cys Pro Leu		700
705	710	715
Leu Ile Lys Glu Gly Gly Met Pro Leu Leu Arg Asp Ile Ile Lys Met		720
	725	730
Ala Thr Ala Arg Gln Glu Thr Lys Glu Met Ala Arg Lys Val Ile Glu		735
	740	745
His Cys Ser Asn Phe Lys Glu Glu Asn Met Asp Thr Ser Arg		750
755	760	765

<210> 5337  
 <211> 2742  
 <212> DNA  
 <213> Homo sapiens

<400> 5337  
 tttttatgga tatttagttt tatttgatac acttgatgc aactttactc attaccattt  
 60  
 ttaaaccat gtttaaaagt tttaaaattt gggtagaggc agaaggagaa ggtcgggttg  
 120  
 tagaagctgg ggtggccggc agctcgctca tcggtgttcg tgggctttgt cggtcctgac  
 180  
 ctgctctctc tctgaaagg gagggaggct tcgacgtcga gagggagccg ctgccgcgtt  
 240  
 agttccgagc ttgaagtcac taggacttct ctcaaacttg tgtgctgagg agactcagat  
 300  
 gttggcctca gtccttaggc tgaactcagc agatcggccc atgaaaactt ctgtattgag  
 360  
 acaaaggaag ggatctgtca gaaagcaaca cttgttatct tgggcttggc agcaaggaag  
 420  
 aggacaggta gtggagatcc tgcaatctga aaagcagact gaaaggtagc aaagaagctg  
 480  
 aagatgggtg gtggagagag gtataacatt ccagcccctc aatctagaaa tgtagtaag  
 540  
 aaccaacaac agcttaacag acagaagacc aaggaacaga attcccagat gaagattgtt  
 600  
 cataagaaaa aagaaagagg acatgggttat aactcatcag cagctgcctg gcaggccatg  
 660  
 caaatgggg ggaagaacaa aaattttcca aataatcaaa gttggaattc tagcttatca  
 720  
 ggtcccagggt tactttttta atctcaagct aatcagaact atgctgggtg caaatttagt  
 780  
 gagccgcat caccaagtgt tcttcccaa ccaccaagcc actgggtccc tgtttcctt  
 840

aatccttcag ataaggaaat aatgacattt caacttaaaa ccttacttaa agtacaggta  
900  
taaaataaga caaatgttta aatttagtta tgttcacgga tagttgtcaa ttggtctgaa  
960  
acaaattcgc tagggaatct atttgtgtag aactaattaa tgtaaaaaaa acagaccatc  
1020  
tcgtgttg tgactgtga tataatggta gtatcagtgc aacttaaact aatgattgta  
1080  
cttgatatta agtgttctca actgagtaac ttttaagtgg aaaccaagtt tagatttggg  
1140  
gagtggtaaa ggaatcagct ttttctattg ttagggggaag acagtaattt atcattcatg  
1200  
gaccagtaga ttgttgaaag ttggtgaatc ggattataag cttctagcta acacaaggat  
1260  
tcagaattag gtaaaccatct gaagggttag tatattagaa acacccaaac cagtaatatg  
1320  
ctaacctgat gcaactgtga aagaaaatgt gaatttttcg taataattgc attttagtga  
1380  
attgtacagt gggtggaag ggcatttgga gtcattaga atgagacata gtacaccca  
1440  
atggccctgt ttattaaatg tagtggatta agtgtctgtc aacaaataca ccaaaccat  
1500  
tttttataga aacagtattt aatggtcact caatagcttt caaaatacat ttttgtatta  
1560  
cagcactgca caagctatct taatagtgtc ctggcctcat cattcctgca aagcttgctt  
1620  
tgaggagttg gataatgtga aaattttaag tacctagggg agaaagagcc atgtaaatat  
1680  
ctgtaataaa cttgtagcat atgtaaagt ttcttggcct ttatcttaca aaaatggagt  
1740  
attttagtat gaatttgctg aatgtaagac cgtggactgt tttttataat atggccta  
1800  
tttaaaggtc caaaataact tgtttttaaa gtttgcctt gtgctaaagt gccagtgtat  
1860  
gtatgttata cttgatttgg ttgtaaacta tatttcaaag taaaccctag tgtaataagt  
1920  
tttataacta aaaagggtgc ttcacattca tatcatgtac attagtagt acataaactt  
1980  
gtcttttaggc tatcaatatt taacttgggc agtacttcat cttgatttat ttggagaaat  
2040  
acagcttagg catctgctta cctgcttagg catcaagagg tgccaaatta gaaaataggg  
2100  
cattaacaat caaaattttt aagctgaccc acatacttgc tactggtttc gcttatgttt  
2160  
aagcatttaa agttggcaaa acatgttatc aatgtattat gcaagagttt acatcttttg  
2220  
cataagtggc ccattgggtt gcacctaccc cttgaccaa caaaaacaaa acatcactgg  
2280  
caccatactc gaaactacct gtatcctagg ttataagatt gtgaaagcca acaatctata  
2340  
aggttggagg gactctagtt aatctttggg cttagaggag gaaaaaaga tagtcccata  
2400  
ctgcatttca catctcttaa aaatagtttt agcagcttaa accttttttag ttataaaact  
2460

tattacacta gggtttactt tgaaatatag ttacaacca aatcaagtat aacatacata  
 2520  
 cactggcact ttagcacaag ggcaaaacttt aaaaacaagt tattttggac ctttaaaatt  
 2580  
 aggccatatt ataaaaaaca gtccacgggc ttacattcag caaattcata ctaaaatact  
 2640  
 ccatttttgt aagataaagg ccaagaaaac ttacatatg ctacaagttt attacagata  
 2700  
 ttacatggc tctttctccc ctaaggactt aaaattttca ca  
 2742

<210> 5338  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 5338  
 Met Gly Gly Gly Glu Arg Tyr Asn Ile Pro Ala Pro Gln Ser Arg Asn  
 1 5 10 15  
 Val Ser Lys Asn Gln Gln Gln Leu Asn Arg Gln Lys Thr Lys Glu Gln  
 20 25 30  
 Asn Ser Gln Met Lys Ile Val His Lys Lys Lys Glu Arg Gly His Gly  
 35 40 45  
 Tyr Asn Ser Ser Ala Ala Ala Trp Gln Ala Met Gln Asn Gly Gly Lys  
 50 55 60  
 Asn Lys Asn Phe Pro Asn Asn Gln Ser Trp Asn Ser Ser Leu Ser Gly  
 65 70 75 80  
 Pro Arg Leu Leu Phe Lys Ser Gln Ala Asn Gln Asn Tyr Ala Gly Ala  
 85 90 95  
 Lys Phe Ser Glu Pro Pro Ser Pro Ser Val Leu Pro Lys Pro Pro Ser  
 100 105 110  
 His Trp Val Pro Val Ser Phe Asn Pro Ser Asp Lys Glu Ile Met Thr  
 115 120 125  
 Phe Gln Leu Lys Thr Leu Leu Lys Val Gln Val  
 130 135

<210> 5339  
 <211> 847  
 <212> DNA  
 <213> Homo sapiens

<400> 5339  
 nngacacttt gagttactta taatagtgt tactataaga tataaagcag tcataattac  
 60  
 ctaagcttca aaaatctttt gtttccatgt ccagagacaa gtacagtaca gtattcttat  
 120  
 ttgtttgctc ccccttttta aaatatataa tagcttatgt tcacttctca tagctccttt  
 180  
 ctttatgaaa aataacatga aaatagaaaa gttgttctaa gtatactttt tgtatatatt  
 240  
 ctagacttat cagatgtaga cttcctagat gattcttcaa cggagagttt gcttctgagt  
 300  
 ggggatgaat acaatcagga ctttgattca accaattttg aggaatctca ggatgaggat  
 360



gatgctctta atgaaattgt gcgatgtatt tgtgagatgg atgaggagaa tggcttcatg  
 420  
 atccagtgtg aagagtgtct gtgttggaac cacagcgtgt gcatggggct gctggaggag  
 480  
 agcattccag agcagtacat ctgctatata tgccgggacc caccaggtca gaggtggagt  
 540  
 gcaaaatata gttatgataa ggagtgggtg aataatggga gaatgtgcgg gttatcattt  
 600  
 ttcaaagaaa attattctca tctcaatgcc aaaaagatag tttctacaca tcacctgctt  
 660  
 gctgatgtct atggtgttac agaagtgtca cacgggctac agctgaagat tggaatacta  
 720  
 aagaataaac atcatcctga ccttcacctc tgggcttggt ccgggaagcg aaaagaccaa  
 780  
 gatcaaataa tagctggggg ggagaaaaaa atagctcaag acacagttaa tcgagaagaa  
 840  
 aaaaaaa  
 847

<210> 5340

<211> 217

<212> PRT

<213> Homo sapiens

<400> 5340

His	Glu	Asn	Arg	Lys	Val	Val	Leu	Ser	Ile	Leu	Phe	Val	Tyr	Ile	Leu
1				5				10					15		
Asp	Leu	Ser	Asp	Val	Asp	Phe	Leu	Asp	Asp	Ser	Ser	Thr	Glu	Ser	Leu
			20					25					30		
Leu	Leu	Ser	Gly	Asp	Glu	Tyr	Asn	Gln	Asp	Phe	Asp	Ser	Thr	Asn	Phe
			35				40					45			
Glu	Glu	Ser	Gln	Asp	Glu	Asp	Asp	Ala	Leu	Asn	Glu	Ile	Val	Arg	Cys
			50			55					60				
Ile	Cys	Glu	Met	Asp	Glu	Glu	Asn	Gly	Phe	Met	Ile	Gln	Cys	Glu	Glu
65					70			75						80	
Cys	Leu	Cys	Trp	Gln	His	Ser	Val	Cys	Met	Gly	Leu	Leu	Glu	Glu	Ser
			85					90						95	
Ile	Pro	Glu	Gln	Tyr	Ile	Cys	Tyr	Ile	Cys	Arg	Asp	Pro	Pro	Gly	Gln
			100					105						110	
Arg	Trp	Ser	Ala	Lys	Tyr	Arg	Tyr	Asp	Lys	Glu	Trp	Leu	Asn	Asn	Gly
			115					120					125		
Arg	Met	Cys	Gly	Leu	Ser	Phe	Phe	Lys	Glu	Asn	Tyr	Ser	His	Leu	Asn
			130				135					140			
Ala	Lys	Lys	Ile	Val	Ser	Thr	His	His	Leu	Leu	Ala	Asp	Val	Tyr	Gly
145					150					155					160
Val	Thr	Glu	Val	Leu	His	Gly	Leu	Gln	Leu	Lys	Ile	Gly	Ile	Leu	Lys
			165					170						175	
Asn	Lys	His	His	Pro	Asp	Leu	His	Leu	Trp	Ala	Cys	Ser	Gly	Lys	Arg
			180					185					190		
Lys	Asp	Gln	Asp	Gln	Ile	Ile	Ala	Gly	Val	Glu	Lys	Lys	Ile	Ala	Gln
		195					200					205			
Asp	Thr	Val	Asn	Arg	Glu	Glu	Lys	Lys							
			210				215								

<210> 5341  
<211> 2455  
<212> DNA  
<213> Homo sapiens

<400> 5341  
nnatgagctg caggtacggt ccggaatccc gggtcgaccc acgcgtccgg ctcctagggga  
60  
ggagctggta ccatgggtgt caggcaacag ttggccttgc tgctgctgct gctgctcctg  
120  
ctctggggcc tggggcagcc agtgtggcca gtcgctgtgg ccttgaccct gcgctggctc  
180  
ctgggggatc ccacatgttg cgtgctactt gggctggcca tgtagcacg gccctggctc  
240  
ggcccttggg tgcccatgg gctgagcctg gcagctgcgg ccctggcact aaccctcctg  
300  
ccagcacggc tgcccccagg actacgctgg ctgccggctg atgtgatctt cttggccaag  
360  
atcctccacc tgggcctgaa gatcagggga tgcttgagcc ggcagccgcc tgacaccttt  
420  
gtagatgcct tcgagcggcg agcacgagcg cagcctggca gggcactctt ggtgtggacg  
480  
gggcctgggg ccggctcagt cacctttggt gagctggatg cccgggcctg ccaggcggca  
540  
tgggccctga aggctgagct gggtgacctt gcgagcctgt gtgccgggga gcctactgcc  
600  
ctccttgtgc tggttccca ggccgttcca gccctgtgta tgtggctggg gctggccaag  
660  
ctgggctgcc caacagcctg gatcaaccgg catggccggg ggatgccctt ggcgcactct  
720  
gtgctgagct ctggggcccg ggtgctgggt gtggaccag acctccggga gagcctggag  
780  
gagatccttc ccaagctgca ggctgagaac atccgctgct tctacctcag ccatacctcc  
840  
cctacaccag ggggtggggc tctgggggct gccctggatg cagcgccctc ccacccagtg  
900  
cctgctgacc tgcgtgctgg gatcacatgg agaagccctg ccctcttcat ctatacctcg  
960  
gggaccactg gcctcccgaa gccagccatc ctacgcatg agcgggtact gcagatgagc  
1020  
aagatgctgt ccttatctgg ggccacagct gatgatgtgg ttacacggg cctgcctctg  
1080  
taccacgtga tgggacttgt cgttgggatc ctgggctgct tagatctcgg agccacctgt  
1140  
gttctggccc ccaagttctc tacttctcgc ttctgggatg actgtcggca gcatggcgtg  
1200  
acagtgatcc tgtatgtggg cgagctcctg cggctactgt gtaacattcc ccagcaacca  
1260  
gaggaccgga cacatacagt ccgcctggca atgggcaatg gactacgggc tgatgtgtgg  
1320  
gagaccttcc agcagcgctt cggctcctatt cggatctggg aagtctacgg ctccacagaa  
1380  
ggcaacatgg gcttagtcaa ctatgtgggg cgctgcgggg ccctgggcaa gatgagctgc  
1440

ctctctccgaa tgctgtcccc ctttgagctg gtgcagttcg acatggagggc ggcggagcct  
 1500  
 gtgagggaca atcagggctt ctgcatccct gtagggctag gggagccggg gctgctgctg  
 1560  
 accaaggtgg taagccagca acccttcgtg ggctaccgag gcccccgaga gctgtcggaa  
 1620  
 cggaagctgg tgcgcaacgt gcggcaatcg ggcgacgttt actacaacac cggggacgta  
 1680  
 ctggccatgg accgcaagg cttcctctac ttccgcgacc gcctcgggga caccttccga  
 1740  
 tggaagggcg agaacgtgtc cacgcacgag gtggagggcg tgttgtcgca ggtggacttc  
 1800  
 ttgcaacagg ttaacgtgta tggcgtgtgc gtgccaggtt gtgagggtaa ggtgggcatg  
 1860  
 gctgctgtgc agctagcccc cggccagact ttcgacgggg agaagttgta ccagcacgtt  
 1920  
 cgcgcttgga tccctgccta cgctaccccc catttcatcc gcatccagga cgccatggag  
 1980  
 gtcaccagca cgttcaaact gatgaagacc cggttggtgc gtgagggctt caatgtgggg  
 2040  
 atcgtggttg accctctgtt tgtactggac aaccggggcc agtccttcg gcccctgacg  
 2100  
 gcagaaatgt accaggctgt gtgtgagggg acctggaagc tctgatcacc tggccaaccc  
 2160  
 actggggtag gggtagggat caaagccagc cccccccacc ccaacacact cgggtgtccct  
 2220  
 ttcacctcgg gcctgtgtga atcccagcct ggccataccc tcaacctcag tgggctggaa  
 2280  
 atgacagtgg gccctgtagc agtggcagaa taaactcaga tgtgttcaca aaaaaaaca  
 2340  
 cgcacgaggt ggagggcggt ttgtcgcagg tggacttctt gcaacagggt aacgtgtatg  
 2400  
 gcgtgtgcgt gccaggttgt gagggtaagg tgggcatggc tgctgtgcag ctage  
 2455

&lt;210&gt; 5342

&lt;211&gt; 690

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5342

Met	Gly	Val	Arg	Gln	Gln	Leu	Ala	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Leu
1				5				10					15						
Leu	Trp	Gly	Leu	Gly	Gln	Pro	Val	Trp	Pro	Val	Ala	Val	Ala	Leu	Thr				
			20					25					30						
Leu	Arg	Trp	Leu	Leu	Gly	Asp	Pro	Thr	Cys	Cys	Val	Leu	Leu	Gly	Leu				
			35				40					45							
Ala	Met	Leu	Ala	Arg	Pro	Trp	Leu	Gly	Pro	Trp	Val	Pro	His	Gly	Leu				
			50				55				60								
Ser	Leu	Ala	Ala	Ala	Ala	Leu	Ala	Leu	Thr	Leu	Leu	Pro	Ala	Arg	Leu				
65					70				75				80						
Pro	Pro	Gly	Leu	Arg	Trp	Leu	Pro	Ala	Asp	Val	Ile	Phe	Leu	Ala	Lys				
			85				90						95						
Ile	Leu	His	Leu	Gly	Leu	Lys	Ile	Arg	Gly	Cys	Leu	Ser	Arg	Gln	Pro				

Pro	Asp	Thr	Phe	Val	Asp	Ala	Phe	Glu	Arg	Arg	Ala	Arg	Ala	Gln	Pro
100															
115															
Gly	Arg	Ala	Leu	Leu	Val	Trp	Thr	Gly	Pro	Gly	Ala	Gly	Ser	Val	Thr
130															
135															
Phe	Gly	Glu	Leu	Asp	Ala	Arg	Ala	Cys	Gln	Ala	Ala	Trp	Ala	Leu	Lys
145															
150															
155															
Ala	Glu	Leu	Gly	Asp	Pro	Ala	Ser	Leu	Cys	Ala	Gly	Glu	Pro	Thr	Ala
165															
170															
175															
Leu	Leu	Val	Leu	Ala	Ser	Gln	Ala	Val	Pro	Ala	Leu	Cys	Met	Trp	Leu
180															
185															
190															
Gly	Leu	Ala	Lys	Leu	Gly	Cys	Pro	Thr	Ala	Trp	Ile	Asn	Pro	His	Gly
195															
200															
205															
Arg	Gly	Met	Pro	Leu	Ala	His	Ser	Val	Leu	Ser	Ser	Gly	Ala	Arg	Val
210															
215															
220															
Leu	Val	Val	Asp	Pro	Asp	Leu	Arg	Glu	Ser	Leu	Glu	Glu	Ile	Leu	Pro
225															
230															
235															
Lys	Leu	Gln	Ala	Glu	Asn	Ile	Arg	Cys	Phe	Tyr	Leu	Ser	His	Thr	Ser
245															
250															
255															
Pro	Thr	Pro	Gly	Val	Gly	Ala	Leu	Gly	Ala	Ala	Leu	Asp	Ala	Ala	Pro
260															
265															
270															
Ser	His	Pro	Val	Pro	Ala	Asp	Leu	Arg	Ala	Gly	Ile	Thr	Trp	Arg	Ser
275															
280															
285															
Pro	Ala	Leu	Phe	Ile	Tyr	Thr	Ser	Gly	Thr	Thr	Gly	Leu	Pro	Lys	Pro
290															
295															
300															
Ala	Ile	Leu	Thr	His	Glu	Arg	Val	Leu	Gln	Met	Ser	Lys	Met	Leu	Ser
305															
310															
315															
Leu	Ser	Gly	Ala	Thr	Ala	Asp	Asp	Val	Val	Tyr	Thr	Val	Leu	Pro	Leu
325															
330															
335															
Tyr	His	Val	Met	Gly	Leu	Val	Val	Gly	Ile	Leu	Gly	Cys	Leu	Asp	Leu
340															
345															
350															
Gly	Ala	Thr	Cys	Val	Leu	Ala	Pro	Lys	Phe	Ser	Thr	Ser	Cys	Phe	Trp
355															
360															
365															
Asp	Asp	Cys	Arg	Gln	His	Gly	Val	Thr	Val	Ile	Leu	Tyr	Val	Gly	Glu
370															
375															
380															
Leu	Leu	Arg	Tyr	Leu	Cys	Asn	Ile	Pro	Gln	Gln	Pro	Glu	Asp	Arg	Thr
385															
390															
395															
His	Thr	Val	Arg	Leu	Ala	Met	Gly	Asn	Gly	Leu	Arg	Ala	Asp	Val	Trp
405															
410															
415															
Glu	Thr	Phe	Gln	Gln	Arg	Phe	Gly	Pro	Ile	Arg	Ile	Trp	Glu	Val	Tyr
420															
425															
430															
Gly	Ser	Thr	Glu	Gly	Asn	Met	Gly	Leu	Val	Asn	Tyr	Val	Gly	Arg	Cys
435															
440															
445															
Gly	Ala	Leu	Gly	Lys	Met	Ser	Cys	Leu	Leu	Arg	Met	Leu	Ser	Pro	Phe
450															
455															
460															
Glu	Leu	Val	Gln	Phe	Asp	Met	Glu	Ala	Ala	Glu	Pro	Val	Arg	Asp	Asn
465															
470															
475															
Gln	Gly	Phe	Cys	Ile	Pro	Val	Gly	Leu	Gly	Glu	Pro	Gly	Leu	Leu	Leu
485															
490															
495															
Thr	Lys	Val	Val	Ser	Gln	Gln	Pro	Phe	Val	Gly	Tyr	Arg	Gly	Pro	Arg
500															
505															
510															
Glu	Leu	Ser	Glu	Arg	Lys	Leu	Val	Arg	Asn	Val	Arg	Gln	Ser	Gly	Asp
515															
520															
525															
Val	Tyr	Tyr	Asn	Thr	Gly	Asp	Val	Leu	Ala	Met	Asp	Arg	Glu	Gly	Phe

530                      535                      540  
 Leu Tyr Phe Arg Asp Arg Leu Gly Asp Thr Phe Arg Trp Lys Gly Glu  
 545                      550                      555                      560  
 Asn Val Ser Thr His Glu Val Glu Gly Val Leu Ser Gln Val Asp Phe  
                     565                      570                      575  
 Leu Gln Gln Val Asn Val Tyr Gly Val Cys Val Pro Gly Cys Glu Gly  
                     580                      585                      590  
 Lys Val Gly Met Ala Ala Val Gln Leu Ala Pro Gly Gln Thr Phe Asp  
                     595                      600                      605  
 Gly Glu Lys Leu Tyr Gln His Val Arg Ala Trp Leu Pro Ala Tyr Ala  
                     610                      615                      620  
 Thr Pro His Phe Ile Arg Ile Gln Asp Ala Met Glu Val Thr Ser Thr  
 625                      630                      635                      640  
 Phe Lys Leu Met Lys Thr Arg Leu Val Arg Glu Gly Phe Asn Val Gly  
                     645                      650                      655  
 Ile Val Val Asp Pro Leu Phe Val Leu Asp Asn Arg Ala Gln Ser Phe  
                     660                      665                      670  
 Arg Pro Leu Thr Ala Glu Met Tyr Gln Ala Val Cys Glu Gly Thr Trp  
                     675                      680                      685  
 Lys Leu  
 690

&lt;210&gt; 5343

&lt;211&gt; 752

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5343

tctagaagcc tgcggcaagg tcgcctctac cggcagccca agttcctgcg gacgatggac  
 60  
 gtgttcgaca tggaacaggg gggatggctg aagatggaac gatcggttctt cctcaagaag  
 120  
 cggcgggcag attttgtggc tggctctctg agtggacggg tcatagtggc tgggggactt  
 180  
 gggaatcaac ccactgtcct ggagacggcg gaagcattcc acccagggaa gaacaaatgg  
 240  
 gagatcctcc ctgccatgcc cacaccccg cgtgcctgct ccagcatagt cgtcaagaac  
 300  
 tgctcctcgc ctgtgggagg tgtcaaccag ggtctgagtg acgcagtgga ggccctgtgt  
 360  
 gtctctgact cctagctgtc tctgggctca gtacctttgc cctggaccat atcacttcac  
 420  
 tcttaacatg aggaatgatc ttgtccaagc agtcggggct acttccaaga atgtcagctc  
 480  
 ctgttagcaa ccagtggagt ctggccttgg ggctctaagt tgacctctct atagctccaa  
 540  
 atcctaccaa tctcagaaaa ctgtaagagg cacagatgac tccaccagct gcagagctga  
 600  
 ctctgaagag agtcttcact tactgcacag gcaaagaaag gcacaggaat atttcctacc  
 660  
 tctccctcct gtgagtecca cctcccccca ccccatctc caggaggcag gtagagcagt  
 720  
 tctgaccgag aggatagact gctgttgctg tc  
 752

<210> 5344  
<211> 124  
<212> PRT  
<213> Homo sapiens

<400> 5344  
Ser Arg Ser Leu Arg Gln Gly Arg Leu Tyr Arg Gln Pro Lys Phe Leu  
1 5 10 15  
Arg Thr Met Asp Val Phe Asp Met Glu Gln Gly Gly Trp Leu Lys Met  
20 25 30  
Glu Arg Ser Phe Phe Leu Lys Lys Arg Arg Ala Asp Phe Val Ala Gly  
35 40 45  
Ser Leu Ser Gly Arg Val Ile Val Ala Gly Gly Leu Gly Asn Gln Pro  
50 55 60  
Thr Val Leu Glu Thr Ala Glu Ala Phe His Pro Gly Lys Asn Lys Trp  
65 70 75 80  
Glu Ile Leu Pro Ala Met Pro Thr Pro Arg Cys Ala Cys Ser Ser Ile  
85 90 95  
Val Val Lys Asn Cys Leu Leu Ala Val Gly Gly Val Asn Gln Gly Leu  
100 105 110  
Ser Asp Ala Val Glu Ala Leu Cys Val Ser Asp Ser  
115 120

<210> 5345  
<211> 1912  
<212> DNA  
<213> Homo sapiens

<400> 5345  
nnctagaatt cagcggccgc tgaattctag gcggcgcggc ggcgacggag caccggcggc  
60  
ggcagggcga gagcattaaa tgaaagcaaa agagttaata atggcaacac ggctccagaa  
120  
gactcttccc ctgccaagaa aactcgtaga tgccagagac aggagtcgaa aaagatgcct  
180  
gtggctggag gaaaagctaa taaggacagg acagaagaca agcaagatgg tatgccagga  
240  
aggatcatggg ccagcaaaaag ggtctctgaa tctgtgaagg ccttgctgtt aaagggcaaa  
300  
gctcctgtgg acccagagtg tacagccaag gtggggaagg ctcattgtgta ttgtgaagga  
360  
aatgatgtct atgatgtcat gctaaatcag accaatctcc agttcaacaa caacaagtac  
420  
tatctgattc agctattaga agatgatgcc cagaggaact tcagtgtttg gatgagatgg  
480  
ggccgagttg ggaaaatggg acagcacagc ctggtggcct gttcaggcaa tctcaacaag  
540  
gccaaggaaa tctttcagaa gaaattcctt gacaaaacga aaaacaattg ggaagatcga  
600  
gaaaagtttg agaaggtgcc tggaaaatat gatatgctac agatggacta tgccaccaat  
660  
actcaggatg aagaggaaac aaagaaagag gaatctctta aatctccctt gaagccagag  
720

tcacagctag atcttcgggt acaggagtta ataaagttga tctgtaatgt tcaggccatg  
 780  
 gaagaaatga tgatggaaat gaagtataat accaagaaag cccacttgg gaagctgaca  
 840  
 gtggcacaaa tcaaggcagg ttaccagtct cttaagaaga ttgaggattg tattcgggct  
 900  
 ggccagcatg gacgagctct catggaagca tgcaatgaat tctacaccag gattccgcat  
 960  
 gactttggac tccgtactcc tccactaatc cggacacaga aggaactgtc agaaaaata  
 1020  
 caattactag aggctttggg agacattgaa attgctatta agctggtgaa aacagagcta  
 1080  
 caaagccag aacacccatt ggaccaacac tatagaaacc tacattgtgc cttgcgcccc  
 1140  
 cttgaccatg aaagttacga gttcaaagtg atttcccagt acctacaatc taccatgct  
 1200  
 cccacacaca gcgactatac catgaccttg ctggatttgt ttgaagtgga gaaggatgg  
 1260  
 gagaaagaag ccttcagaga ggaccttcac aacaggatgc ttctatggca tggttccagg  
 1320  
 atgagtaact ggggtgggaat cttgagccat gggcttcgaa ttgccccacc tgaagctccc  
 1380  
 atcacagggt acatgtttgg gaaaggaatc tactttgctg acatgtcttc caagagtgc  
 1440  
 aattactgct ttgcctctcg cctaaagaat acaggactgc tgctcttacc agaggtagct  
 1500  
 ctaggtcagt gtaatgaact actagaggcc aatcctaagg ccgaaggatt gcttcaagg  
 1560  
 aaacatagca ccaaggggct gggcaagatg gctcccagtt ctgcccactt cgtcaccctg  
 1620  
 aatgggagta cagtgccatt aggaccagca agtgacacag gaattctgaa tccagatgg  
 1680  
 tataccctca actacaatga atatattgta tataacccca accaggtccg tatgcggtac  
 1740  
 cttttaaaagg ttcagtttaa tttccttcag ctgtggtgaa tgttgatatt aaataaacca  
 1800  
 gagatctgat cttcaagcaa gaaaataagc agtgtgtgac ttgtgaattt tgtgatatt  
 1860  
 tatgtaataa aaactgtaca ggtctaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 1912

&lt;210&gt; 5346

&lt;211&gt; 534

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5346

Met	Pro	Val	Ala	Gly	Gly	Lys	Ala	Asn	Lys	Asp	Arg	Thr	Glu	Asp	Lys
1				5					10					15	
Gln	Asp	Gly	Met	Pro	Gly	Arg	Ser	Trp	Ala	Ser	Lys	Arg	Val	Ser	Glu
			20					25				30			
Ser	Val	Lys	Ala	Leu	Leu	Leu	Lys	Gly	Lys	Ala	Pro	Val	Asp	Pro	Glu
		35					40				45				
Cys	Thr	Ala	Lys	Val	Gly	Lys	Ala	His	Val	Tyr	Cys	Glu	Gly	Asn	Asp

50					55					60					
Val	Tyr	Asp	Val	Met	Leu	Asn	Gln	Thr	Asn	Leu	Gln	Phe	Asn	Asn	Asn
65					70					75					80
Lys	Tyr	Tyr	Leu	Ile	Gln	Leu	Leu	Glu	Asp	Asp	Ala	Gln	Arg	Asn	Phe
				85					90					95	
Ser	Val	Trp	Met	Arg	Trp	Gly	Arg	Val	Gly	Lys	Met	Gly	Gln	His	Ser
			100					105					110		
Leu	Val	Ala	Cys	Ser	Gly	Asn	Leu	Asn	Lys	Ala	Lys	Glu	Ile	Phe	Gln
		115					120					125			
Lys	Lys	Phe	Leu	Asp	Lys	Thr	Lys	Asn	Asn	Trp	Glu	Asp	Arg	Glu	Lys
	130					135					140				
Phe	Glu	Lys	Val	Pro	Gly	Lys	Tyr	Asp	Met	Leu	Gln	Met	Asp	Tyr	Ala
145					150					155					160
Thr	Asn	Thr	Gln	Asp	Glu	Glu	Glu	Thr	Lys	Lys	Glu	Glu	Ser	Leu	Lys
				165					170					175	
Ser	Pro	Leu	Lys	Pro	Glu	Ser	Gln	Leu	Asp	Leu	Arg	Val	Gln	Glu	Leu
			180					185					190		
Ile	Lys	Leu	Ile	Cys	Asn	Val	Gln	Ala	Met	Glu	Glu	Met	Met	Met	Glu
		195					200					205			
Met	Lys	Tyr	Asn	Thr	Lys	Lys	Ala	Pro	Leu	Gly	Lys	Leu	Thr	Val	Ala
	210					215					220				
Gln	Ile	Lys	Ala	Gly	Tyr	Gln	Ser	Leu	Lys	Lys	Ile	Glu	Asp	Cys	Ile
225					230					235					240
Arg	Ala	Gly	Gln	His	Gly	Arg	Ala	Leu	Met	Glu	Ala	Cys	Asn	Glu	Phe
				245					250					255	
Tyr	Thr	Arg	Ile	Pro	His	Asp	Phe	Gly	Leu	Arg	Thr	Pro	Pro	Leu	Ile
			260					265					270		
Arg	Thr	Gln	Lys	Glu	Leu	Ser	Glu	Lys	Ile	Gln	Leu	Leu	Glu	Ala	Leu
		275					280					285			
Gly	Asp	Ile	Glu	Ile	Ala	Ile	Lys	Leu	Val	Lys	Thr	Glu	Leu	Gln	Ser
	290					295					300				
Pro	Glu	His	Pro	Leu	Asp	Gln	His	Tyr	Arg	Asn	Leu	His	Cys	Ala	Leu
305					310					315					320
Arg	Pro	Leu	Asp	His	Glu	Ser	Tyr	Glu	Phe	Lys	Val	Ile	Ser	Gln	Tyr
				325					330					335	
Leu	Gln	Ser	Thr	His	Ala	Pro	Thr	His	Ser	Asp	Tyr	Thr	Met	Thr	Leu
			340					345					350		
Leu	Asp	Leu	Phe	Glu	Val	Glu	Lys	Asp	Gly	Glu	Lys	Glu	Ala	Phe	Arg
		355					360					365			
Glu	Asp	Leu	His	Asn	Arg	Met	Leu	Leu	Trp	His	Gly	Ser	Arg	Met	Ser
	370					375					380				
Asn	Trp	Val	Gly	Ile	Leu	Ser	His	Gly	Leu	Arg	Ile	Ala	Pro	Pro	Glu
385					390					395					400
Ala	Pro	Ile	Thr	Gly	Tyr	Met	Phe	Gly	Lys	Gly	Ile	Tyr	Phe	Ala	Asp
				405					410						



	485		490		495										
Ile	Leu	Asn	Pro	Asp	Gly	Tyr	Thr	Leu	Asn	Tyr	Asn	Glu	Tyr	Ile	Val
	500		505		510										
Tyr	Asn	Pro	Asn	Gln	Val	Arg	Met	Arg	Tyr	Leu	Leu	Lys	Val	Gln	Phe
	515		520		525										
Asn	Phe	Leu	Gln	Leu	Trp										
	530														

&lt;210&gt; 5347&lt;211&gt; 2893

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5347

gagcttggcc accgcgccgg gctgcggggcg gctggggcgaa cgggctcggc gctcaggtgg  
 60  
 ctccttcttc gcttctcccg atccccggcg gtgccaggca cggtgccggc tgccgagggg  
 120  
 acgcctttgt gcccggtgct gggaaccgc gacggccgcc acgcgccccg gtccattgtt  
 180  
 tcgcttatct gggttccagg cagggtgcggg cggcgcgcgcg ggtccgcacg tgtcaccctg  
 240  
 gcggctgggg cgcggggacc cgcggggcgcc ggcagggggcg ttcccggggc cgcggcgggc  
 300  
 atgaagcacc tgaagcgggtg gtggtcggcc ggcggcgggc tcctgcacct caccctcctg  
 360  
 ctgagcttgg cggggctccg cgtagacctg gatctttacc tgctgctgcc gccgccacc  
 420  
 ctgctgcagg acgagctgct gttcctgggc ggcccggcca gctccgccta cgcgctcagc  
 480  
 cccttctcgg cctcgggagg gtggggggcg cgcgggccact tgcaccccaa gggccgggag  
 540  
 ctggaccctg ccgcgccgcc cgagggccag ctgctccggg aggtgcgcgc gctcggggtc  
 600  
 cccttcgtcc ctgcaccag cgtggatgca tggctggtgc acagcgtggc tgccgggagc  
 660  
 gcggacgagg ccacgggct gctcggcgcc gccgccgcct cgtccaccgg aggagccggc  
 720  
 gccagcgtgg acggcggcag ccaggctgtg caggggggct gcggggactc ccgagcggct  
 780  
 cggagtggcc ccttggaagc cggggaagag gagaaggcac ccgcggaacc gacggctcag  
 840  
 gtgccggacg ctggcggtatg tgcgagcgag gagaatgggg tactaagaga aaagcacgaa  
 900  
 gctgtggatc atagttccca gcatgaggaa aatgaagaaa ggggtgtcagc ccagaaggag  
 960  
 aactcacttc agcagaatga tgatgatgaa aacaaaatag cagagaaacc tgactgggag  
 1020  
 gcagaaaaga cactgaatc tagaaatgag agacatctga atgggacaga tacttctttc  
 1080  
 tctctggaag acttattcca gttgctttca tcacagcctg aaaattcact ggagggcatc  
 1140  
 tcattgggag atattcctct tccaggcagt atcagtgatg gcatgaattc ttcagcacat  
 1200

tatcatgtaa acttcagcca ggctataagt caggatgtga atcttcatga ggccatcttg  
1260  
ctttgtccca acaatacatt tagaagagat ccaacagcaa ggacttcaca gtcacaagaa  
1320  
ccatttctgc agttaaatc tcataccacc aatcctgagc aaacccttcc tggaactaat  
1380  
ttgacaggat ttctttcacc gggtgacaat catatgagga atctaacaag ccaagaccta  
1440  
ctgtatgacc ttgacataaa tatatttgat gagataaact taatgtcatt ggccacagaa  
1500  
gacaactttg atccaatcga tgtttctcag ctttttgatg aatcagattc tgattctggc  
1560  
ctttctttag attcaagtca caataatacc tctgtcatca agtctaattc ctctcactct  
1620  
gtgtgtgatg aagggtgctat aggttattgc actgaccatg aatctagttc ccatcatgac  
1680  
ttagaagggtg ctgtagggtg ctactacca gaaccagta agctttgtca cttggatcaa  
1740  
agtattctg atttccatgg agatcttaca tttcaacacg tatttcataa ccacacttac  
1800  
cacttacagc caactgcacc agaattctact tctgaacctt ttccgtggcc tgggaagtca  
1860  
cagaagataa ggagtagata ccttgaagac acagatagaa acttgagccg tgatgaacag  
1920  
cgtgctaaag ctttgcataat ccctttttct gtagatgaaa ttgtcggcat gcctgttgat  
1980  
tctttcaata gcatgttaag tagatattat ctgacagacc tacaagtctc acttatccgt  
2040  
gacatcagac gaagagggaa aaataaagtt gctgctcaga actgtcgtaa acgcaaattg  
2100  
gacataattt tgaatttaga agatgatgta tgtaacttgc aagcaaagaa ggaaactctt  
2160  
aagagagagc aagcacaatg taacaaagct attaacataa tgaaacagaa actgcatgac  
2220  
ctttatcatg atatttttag tagattaaga gatgaccaag gtaggccagt caatcccaac  
2280  
cactatgctc tccagtgtac ccatgatgga agtatcttga tagtaccxaa agaactggtg  
2340  
gcctcaggcc acaaaaagga aacccaaaag ggaaagagaa agtgagaaga aactgaagat  
2400  
ggactctatt atgtgaagta gtaatgttca gaaactgatt atttggatca gaaaccattg  
2460  
aaactgcttc aagaattgta tctttaagta ctgctacttg aataactcag ttaacgctgt  
2520  
tttgaagctt acatggacaa atgttttaga cttcaagatc acacttgtgg gcaatctggg  
2580  
ggagccacaa cttttcatga agtgcattgt atacaaaatt catagttagt tccaaagaat  
2640  
aggttaacat gaaaaccag taagacttcc catcttggca gccatccttt ttaagagtaa  
2700  
gttggttact tcaaaaagag caaacactgg ggatcaaatt attttaagag gtatttcagt  
2760  
tttaaagca aaatagcctt attttcattt agtttgtag cactatagtg agcttttcaa  
2820

acactattttt aatctttata tttaacttat aaattttgct ttctatggaa ataaattttg  
 2880  
 tatttgtatt aaa  
 2893

<210> 5348  
 <211> 694  
 <212> PRT  
 <213> Homo sapiens

<400> 5348  
 Met Lys His Leu Lys Arg Trp Trp Ser Ala Gly Gly Gly Leu Leu His  
 1 5 10 15  
 Leu Thr Leu Leu Leu Ser Leu Ala Gly Leu Arg Val Asp Leu Asp Leu  
 20 25 30  
 Tyr Leu Leu Leu Pro Pro Pro Thr Leu Leu Gln Asp Glu Leu Leu Phe  
 35 40 45  
 Leu Gly Gly Pro Ala Ser Ser Ala Tyr Ala Leu Ser Pro Phe Ser Ala  
 50 55 60  
 Ser Gly Gly Trp Gly Arg Ala Gly His Leu His Pro Lys Gly Arg Glu  
 65 70 75 80  
 Leu Asp Pro Ala Ala Pro Pro Glu Gly Gln Leu Leu Arg Glu Val Arg  
 85 90 95  
 Ala Leu Gly Val Pro Phe Val Pro Arg Thr Ser Val Asp Ala Trp Leu  
 100 105 110  
 Val His Ser Val Ala Ala Gly Ser Ala Asp Glu Ala His Gly Leu Leu  
 115 120 125  
 Gly Ala Ala Ala Ala Ser Ser Thr Gly Gly Ala Gly Ala Ser Val Asp  
 130 135 140  
 Gly Gly Ser Gln Ala Val Gln Gly Gly Cys Gly Asp Ser Arg Ala Ala  
 145 150 155 160  
 Arg Ser Gly Pro Leu Asp Ala Gly Glu Glu Glu Lys Ala Pro Ala Glu  
 165 170 175  
 Pro Thr Ala Gln Val Pro Asp Ala Gly Gly Cys Ala Ser Glu Glu Asn  
 180 185 190  
 Gly Val Leu Arg Glu Lys His Glu Ala Val Asp His Ser Ser Gln His  
 195 200 205  
 Glu Glu Asn Glu Glu Arg Val Ser Ala Gln Lys Glu Asn Ser Leu Gln  
 210 215 220  
 Gln Asn Asp Asp Asp Glu Asn Lys Ile Ala Glu Lys Pro Asp Trp Glu  
 225 230 235 240  
 Ala Glu Lys Thr Thr Glu Ser Arg Asn Glu Arg His Leu Asn Gly Thr  
 245 250 255  
 Asp Thr Ser Phe Ser Leu Glu Asp Leu Phe Gln Leu Leu Ser Ser Gln  
 260 265 270  
 Pro Glu Asn Ser Leu Glu Gly Ile Ser Leu Gly Asp Ile Pro Leu Pro  
 275 280 285  
 Gly Ser Ile Ser Asp Gly Met Asn Ser Ser Ala His Tyr His Val Asn  
 290 295 300  
 Phe Ser Gln Ala Ile Ser Gln Asp Val Asn Leu His Glu Ala Ile Leu  
 305 310 315 320  
 Leu Cys Pro Asn Asn Thr Phe Arg Arg Asp Pro Thr Ala Arg Thr Ser  
 325 330 335  
 Gln Ser Gln Glu Pro Phe Leu Gln Leu Asn Ser His Thr Thr Asn Pro

340					345					350					
Glu	Gln	Thr	Leu	Pro	Gly	Thr	Asn	Leu	Thr	Gly	Phe	Leu	Ser	Pro	Val
		355					360					365			
Asp	Asn	His	Met	Arg	Asn	Leu	Thr	Ser	Gln	Asp	Leu	Leu	Tyr	Asp	Leu
	370					375					380				
Asp	Ile	Asn	Ile	Phe	Asp	Glu	Ile	Asn	Leu	Met	Ser	Leu	Ala	Thr	Glu
385						390					395				400
Asp	Asn	Phe	Asp	Pro	Ile	Asp	Val	Ser	Gln	Leu	Phe	Asp	Glu	Ser	Asp
				405					410					415	
Ser	Asp	Ser	Gly	Leu	Ser	Leu	Asp	Ser	Ser	His	Asn	Asn	Thr	Ser	Val
			420						425				430		
Ile	Lys	Ser	Asn	Ser	Ser	Ser	His	Ser	Val	Cys	Asp	Glu	Gly	Ala	Ile
			435						440				445		
Tyr	Cys	Thr	Asp	His	Glu	Ser	Ser	Ser	His	His	Asp	Leu	Glu	Gly	Ala
	450					455					460				
Val	Gly	Gly	Tyr	Tyr	Pro	Glu	Pro	Ser	Lys	Leu	Cys	His	Leu	Asp	Gln
465						470					475				480
Ser	Asp	Ser	Asp	Phe	His	Gly	Asp	Leu	Thr	Phe	Gln	His	Val	Phe	His
				485					490					495	
Asn	His	Thr	Tyr	His	Leu	Gln	Pro	Thr	Ala	Pro	Glu	Ser	Thr	Ser	Glu
			500						505				510		
Pro	Phe	Pro	Trp	Pro	Gly	Lys	Ser	Gln	Lys	Ile	Arg	Ser	Arg	Tyr	Leu
			515						520				525		
Glu	Asp	Thr	Asp	Arg	Asn	Leu	Ser	Arg	Asp	Glu	Gln	Arg	Ala	Lys	Ala
	530					535					540				
Leu	His	Ile	Pro	Phe	Ser	Val	Asp	Glu	Ile	Val	Gly	Met	Pro	Val	Asp
545						550					555				560
Ser	Phe	Asn	Ser	Met	Leu	Ser	Arg	Tyr	Tyr	Leu	Thr	Asp	Leu	Gln	Val
				565					570					575	Leu Ile Arg
Asp	Ile	Arg	Arg	Arg	Gly	Lys	Asn	Lys	Val	Ala	Ala				
			580						585				590		
Gln	Asn	Cys	Arg	Lys	Arg	Lys	Leu	Asp	Ile	Ile	Leu	Asn	Leu	Glu	Asp
			595						600				605		
Asp	Val	Cys	Asn	Leu	Gln	Ala	Lys	Lys	Glu	Thr	Leu	Lys	Arg	Glu	Gln
	610					615					620				
Ala	Gln	Cys	Asn	Lys	Ala	Ile	Asn	Ile	Met	Lys	Gln	Lys	Leu	His	Asp
625						630					635				640
Leu	Tyr	His	Asp	Ile	Phe	Ser	Arg	Leu	Arg	Asp	Asp	Gln	Gly	Arg	Pro
				645					650					655	
Val	Asn	Pro	Asn	His	Tyr	Ala	Leu	Gln	Cys	Thr	His	Asp	Gly	Ser	Ile
			660						665				670		
Leu	Ile	Val	Pro	Lys	Glu	Leu	Val	Ala	Ser	Gly	His	Lys</			

```
<210> 5349
<211> 425
<212> DNA
<213> Homo sapiens
```

<400> 5349  
gtgcacgaag ttccaatggg cttatgggag ggctaggtct ccacttcttt gtacctacac  
60

acagttctca ggtcactgca tgtcactcct caccactgcc ctgtggttgc caggacaact  
 120  
 tgggcaaaca ccacaccagc agggagcccc aagcccagcc caagccccac aaagtctcca  
 180  
 gccaggaagg ggaaggcagg ataccactgc ctgggaaggc ggaagtgaga gaggcaggcc  
 240  
 aacccattcc tgtttctctt ctacttcttt ctccaaagaa agccctcact ctctctgcta  
 300  
 cagcccaggg aggtcacgag gggctgggaa gactctgtg gcaaagtggc cactccagc  
 360  
 ccaggcctga gaaaaaagg accccgaaat cttctggt accagtatct tctgccttca  
 420  
 cgcg  
 425

<210> 5350

<211> 134

<212> PRT

<213> Homo sapiens

<400> 5350

Met	Gly	Gly	Leu	Gly	Leu	His	Phe	Phe	Val	Pro	Thr	His	Ser	Ser	Gln
1				5					10					15	
Val	Thr	Ala	Cys	His	Ser	Ser	Pro	Leu	Pro	Cys	Gly	Cys	Gln	Asp	Asn
			20					25					30		
Leu	Gly	Lys	His	His	Thr	Ser	Arg	Glu	Pro	Gln	Ala	Gln	Pro	Lys	Pro
			35				40					45			
His	Lys	Val	Ser	Ser	Gln	Glu	Gly	Glu	Gly	Arg	Ile	Pro	Leu	Pro	Gly
			50			55				60					
Lys	Ala	Glu	Val	Arg	Glu	Ala	Gly	Gln	Pro	Ile	Pro	Val	Ser	Leu	Leu
65					70				75					80	
Leu	Leu	Ser	Pro	Lys	Lys	Ala	Leu	Thr	Leu	Leu	Ala	Thr	Ala	Gln	Gly
				85				90						95	
Gly	His	Glu	Gly	Leu	Gly	Arg	Leu	Leu	Trp	Gln	Ser	Gly	Pro	Leu	Gln
			100				105					110			
Pro	Arg	Pro	Glu	Lys	Lys	Arg	Thr	Pro	Lys	Ser	Phe	Trp	Leu	Pro	Val
			115				120					125			
Ser	Ser	Ala	Phe	Thr	Arg										
															130

<210> 5351

<211> 343

<212> DNA

<213> Homo sapiens

<400> 5351

gtgcacagtc agctcgacta ggggtgtcata ggccgcgctg cactgtcggc atcggaatct  
 60  
 gctggcccct gtgaacacag tcccgcacat cttgctgctc tgtcgggtaca actgcaccga  
 120  
 gctgaacagg ctgggttttcg agacggaccg agaaggcaag ttctgctgca ggcttttggga  
 180  
 cagagcgtct tgggtccaat caaaatcact cttgttgctg ccgtttcggg tgtcacagtt  
 240

cctcctctca ctattggaca gcttgaagcc aaggcccagg cctgaccagt aggaatccga  
300  
caggatgttg gcgtagacag cggtcatttt atccatgcaa ttg  
343

<210> 5352  
<211> 112  
<212> PRT  
<213> Homo sapiens

<400> 5352  
Met Asp Lys Met Thr Ala Val Tyr Ala Asn Ile Leu Ser Asp Ser Tyr  
1 5 10 15  
Trp Ser Gly Leu Gly Leu Gly Phe Lys Leu Ser Asn Ser Glu Arg Arg  
20 25 30  
Asn Cys Asp Thr Arg Asn Gly Ser Asn Lys Ser Asp Phe Asp Trp His  
35 40 45  
Gln Asp Ala Leu Ser Lys Ser Leu Gln Gln Asn Leu Pro Ser Arg Ser  
50 55 60  
Val Ser Lys Pro Ser Leu Phe Ser Ser Val Gln Leu Tyr Arg Gln Ser  
65 70 75 80  
Ser Lys Met Cys Gly Thr Val Phe Thr Gly Ala Ser Arg Phe Arg Cys  
85 90 95  
Arg Gln Cys Ser Ala Ala Tyr Asp Thr Leu Val Glu Leu Thr Val His  
100 105 110

<210> 5353  
<211> 4217<212> DNA  
<213> Homo sapiens

<400> 5353  
tttttttttt ttgaaatgta agtatacaga ttttaattta tttttaagaa taattgtata  
60  
ttttaaaaac aggacacgta ctgtatgagt aaacagcgtg gctaacacca agtccacact  
120  
ggtaagcttt tgagaaccat ttacactatg ttgacagtag tactgctgca ggcagacagc  
180  
ggaagaataa ataatagtgc ttcaagaaga gtagtgattg agaggatagg taaagagggc  
240  
gcctcatcgt ggaagctaga gcaggaacac ctccccagta gtgacatgtg caaagttcca  
300  
aatctccacg acaaagacag ctcaaccacac tggaacaaac agactcccaa tgtggctggc  
360  
aactgcgggg gtagaagaac tcaggcaaag taggcacagg aatgggggag atgagagcca  
420  
agggacaaac gccgagaaag cgttccgaca agcatgtgtg ttcatacatg cataccccca  
480  
acaaagggca atgcactgtg taacagaact gaacacaatt taacaaagct gctcccagcc  
540  
ttcctgtcac ctctttggca gtagggcagg ccatctcaac ttcggacaca caaagacatt  
600  
ctcttcagga ggaaggctgt cctgtgtggt ggggacaagg cttcaggtaa gagcaaagct  
660

atgatagcta cagcattaat tgaacatgcc taaacaaaaa agatgttaat tactagttac  
720  
aggtatacat gccaaaatta cccccaggga tgggcatagt caatcatttt cctacagtgg  
780  
tgaaataaaa caagctttga tcatgcttca gcaagtagaa ttatgtggta gagaagtcag  
840  
gccccatatg ctaaaatttg cacttcttgc cataaacttt tcatgtatat aagtcaaaac  
900  
ccagtctcct aggaccacta aacctatgat gggctttcaa ctgtaacact cattcacatc  
960  
tttaagttag gcccatgggc atggaacctg gccaaaggtt caagcacgcc taagctgaag  
1020  
aaaaactaaa gtcacccccca tataattagg tccagtctag gcacaggaag ccacagctgg  
1080  
ttgactgac agggcttctc aggactggat gttggttgaa ttgaggattc cagaagtagc  
1140  
atcagatttg gaagcctttg aaagtctctg ctgttgaaaa ataaataaca tcagtggcca  
1200  
tactgcctct cttacacatg gccaccctt ctaagtttgg ttaagtgtca gcaaaaggtc  
1260  
ccttgaaggc agtttctctg agatccctag cctgcaatag gctgcgtag gagtaaaagg  
1320  
tgaggaaact tgagcaccat tctattagtc acagacagag tgcattgtca cgcattgccc  
1380  
tgaccccgcc ggggccaggga ggaagctgga gccggaggcc gggcgaggag ttggtctccg  
1440  
ccgcccaggg tcagccgctc cgcgcacgtc cctcgctgc agcgctaccg cgagctgcac  
1500  
cgcgctccg tggaggagcc gcgggaattc tggggagaca ttgccaagga attttactgg  
1560  
aagactccat gccctggccc attccttcgg tacaactttg atgtgactaa agggaaaatc  
1620  
ttcattgagt ggatgaaagg agcaactacc aacatctgct acaatgtact ggatcgaaat  
1680  
gtccatgaga aaaagcttgg agataaagtt gctttttact gggagggcaa tgagccaggg  
1740  
gagaccactc agatcacata ccatcagctt ctggtccaag tgtgtcagtt cagcaatgtt  
1800  
ctccgaaaac agggcattca gaagggggac cgagtggcca tctacatgcc tatgatccca  
1860  
gagcttgtgg tggccatgct ggcattgtcc cgcattgggg ctttgcactc cattgtgttt  
1920  
gcaggcttct cttcagagtc tctatgtgaa cggatcttgg attccagctg cagtcttctc  
1980  
atcactacag atgccttcta caggggggaa aagcttgtga acctgaagga gctggctgac  
2040  
gaggccctgc agaagtgtca ggagaagggt tcccagtaa gatgctgcat tgtggtcaag  
2100  
cacctggggc gggcagagct cggcatgggt actccaccag ccagtcccc ccaattaaga  
2160  
ggtcatgccg atgtgcagat ctcattggaac caagggattg acttgtggtg gcatgagctc  
2220  
atgcaagagg caggggatga gtgtgagccc gagggtgtg atgccgagga cccactcttc  
2280

atcctgtaca ccagtggctc cacaggcaaa cccaaggggtg tggttcacac agttgggggc  
2340  
tacatgctct atgtagccac aaccttcaag tatgtgtttg acttccatgc agaggatgtg  
2400  
ttctggtgca cggcagacat tggttggatc actggtcatt cctacgtcac ctatgggcca  
2460  
ctggccaatg gtgccaccag tgttttgttt gaggggattc ccacatatcc ggacgtgaac  
2520  
cgctgtgga gcattgtgga caaatacaag gtgaccaagt tctacacagc acccacagcc  
2580  
atccgtctgc tcatgaagtt tggagatgag cctgtcacca agcatagccg ggcatccttg  
2640  
caggtgttag gcacagtggg tgaacccatc aaccctgagg cctggctatg gtaccaccgg  
2700  
gtggtagggtg cccagcgctg ccccatcgtg gacaccttct ggcaaacaga gacaggtggc  
2760  
cacatgttga ctcccccttc tgttcccaca cccatgaaac ccggttctgc tactttccca  
2820  
ttctttggtg tagctcctgc aatcctgaat gagtccgggg aagagttgga aggtgaagct  
2880  
gaaggttatc tgggtgttcaa gcagccctgg ccagggatca tgcgcacagt ctatgggaac  
2940  
cacgaacgct ttgagacaac ctactctaag aagtttctct gatactatgt tacaggagat  
3000  
ggctgccagc gggaccagga tggctattac tggatcactg gcaggattga tgacatgctc  
3060  
aatgtatctg gacacctgct gagtacagca gaggtggagt cagcacttgt ggaacatgag  
3120  
gctgttgagc aggcagctgt ggtggggccac cctcatcctg tgaagggtga atgcctctac  
3180  
tgctttgtca ccttgtgtga tggccacacc ttcagcccca agctcaccga ggagctcaag  
3240  
aagcagatta gagaaaagat tggccccatt gccacaccag actacatcca gaatgcacct  
3300  
ggcttgccca aaaccgctc agggaaaatc atgaggcgag tgcttcggaa gattgctcag  
3360  
aatgaccatg acctcgggga catgtctact gtggctgacc catctgtcat cagtcacctc  
3420  
ttcagccacc gctgcctgac catccagtga acatgatcct gacctttacc taggattcct  
3480  
cctgctccaa actttgcccc tcctctttgc cccctcagga gtgctgaggg ccagtgttga  
3540  
cccacactac cctcccttga ccagtgtct gggaccggaa accagctttg tctccaggta  
3600  
gagacaacat cctgtgactg ccaggcagaa aggacagggc ccaggtcagc ctcagtctgc  
3660  
tgtgcctcca gactgcagag ctctcagaac ccagaacaga gacgaaaagg ctacctctcc  
3720  
tacccaagtt aagtgttcaa aggggatgtg agggcctcca ctgaagcagg gaggcagctg  
3780  
tgtaatccta tgtcagctct cttaggaagc cccagtactt atattgggca tgcacttgcc  
3840  
cttaaaaaca atgatttgtg agtccaggaa caatttacta tttttaaaat attttgcctg  
3900



ttctgttctg ggtctgaatt cccttttctg ccagatgccg gtactgtctg cccattggct  
 3960  
 ccaggggctg tatgggcaga ttcagtcctc agaggggtatt cagatcatct gcttctttga  
 4020  
 aggagtaaat gtgttttctt cctagggcca gaggagcttg tcttccttct cctctgttcc  
 4080  
 caccctcccc tgaacagAAC ccagcccata agagacattc tcagatgaaa ctctgttttc  
 4140  
 ttgccccagt caggctcaag ccctgtgggt gtaggaataa agcctgtgat ctcaaaaaaa  
 4200  
 aaaaaaaaaa aaaaaaa  
 4217

<210> 5354  
 <211> 605  
 <212> PRT  
 <213> Homo sapiens

<400> 5354  
 Met Lys Gly Ala Thr Thr Asn Ile Cys Tyr Asn Val Leu Asp Arg Asn  
 1 5 10 15  
 Val His Glu Lys Lys Leu Gly Asp Lys Val Ala Phe Tyr Trp Glu Gly  
 20 25 30  
 Asn Glu Pro Gly Glu Thr Thr Gln Ile Thr Tyr His Gln Leu Leu Val  
 35 40 45  
 Gln Val Cys Gln Phe Ser Asn Val Leu Arg Lys Gln Gly Ile Gln Lys  
 50 55 60  
 Gly Asp Arg Val Ala Ile Tyr Met Pro Met Ile Pro Glu Leu Val Val  
 65 70 75 80  
 Ala Met Leu Ala Cys Ala Arg Ile Gly Ala Leu His Ser Ile Val Phe  
 85 90 95  
 Ala Gly Phe Ser Ser Glu Ser Leu Cys Glu Arg Ile Leu Asp Ser Ser  
 100 105 110  
 Cys Ser Leu Leu Ile Thr Thr Asp Ala Phe Tyr Arg Gly Glu Lys Leu  
 115 120 125  
 Val Asn Leu Lys Glu Leu Ala Asp Glu Ala Leu Gln Lys Cys Gln Glu  
 130 135 140  
 Lys Gly Phe Pro Val Arg Cys Cys Ile Val Val Lys His Leu Gly Arg  
 145 150 155 160  
 Ala Glu Leu Gly Met Gly Thr Pro Pro Ala Ser Pro Pro Gln Leu Arg  
 165 170 175  
 Gly His Ala Asp Val Gln Ile Ser Trp Asn Gln Gly Ile Asp Leu Trp  
 180 185 190  
 Trp His Glu Leu Met Gln Glu Ala Gly Asp Glu Cys Glu Pro Glu Trp  
 195 200 205  
 Cys Asp Ala Glu Asp Pro Leu Phe Ile Leu Tyr Thr Ser Gly Ser Thr  
 210 215 220  
 Gly Lys Pro Lys Gly Val Val His Thr Val Gly Gly Tyr Met Leu Tyr  
 225 230 235 240  
 Val Ala Thr Thr Phe Lys Tyr Val Phe Asp Phe His Ala Glu Asp Val  
 245 250 255  
 Phe Trp Cys Thr Ala Asp Ile Gly Trp Ile Thr Gly His Ser Tyr Val  
 260 265 270  
 Thr Tyr Gly Pro Leu Ala Asn Gly Ala Thr Ser Val Leu Phe Glu Gly

275	280	285
Ile Pro Thr Tyr Pro Asp Val Asn Arg Leu Trp Ser Ile Val Asp Lys		
290	295	300
Tyr Lys Val Thr Lys Phe Tyr Thr Ala Pro Thr Ala Ile Arg Leu Leu		
305	310	315
Met Lys Phe Gly Asp Glu Pro Val Thr Lys His Ser Arg Ala Ser Leu		
325	330	335
Gln Val Leu Gly Thr Val Gly Glu Pro Ile Asn Pro Glu Ala Trp Leu		
340	345	350
Trp Tyr His Arg Val Val Gly Ala Gln Arg Cys Pro Ile Val Asp Thr		
355	360	365
Phe Trp Gln Thr Glu Thr Gly Gly His Met Leu Thr Pro Leu Pro Val		
370	375	380
Pro Thr Pro Met Lys Pro Gly Ser Ala Thr Phe Pro Phe Phe Gly Val		
385	390	395
Ala Pro Ala Ile Leu Asn Glu Ser Gly Glu Leu Glu Gly Glu Ala		
405	410	415
Glu Gly Tyr Leu Val Phe Lys Gln Pro Trp Pro Gly Ile Met Arg Thr		
420	425	430
Val Tyr Gly Asn His Glu Arg Phe Glu Thr Thr Tyr Ser Lys Lys Phe		
435	440	445
Pro Gly Tyr Tyr Val Thr Gly Asp Gly Cys Gln Arg Asp Gln Asp Gly		
450	455	460
Tyr Tyr Trp Ile Thr Gly Arg Ile Asp Asp Met Leu Asn Val Ser Gly		
465	470	475
His Leu Leu Ser Thr Ala Glu Val Glu Ser Ala Leu Val Glu His Glu		
485	490	495
Ala Val Ala Glu Ala Ala Val Val Gly His Pro His Pro Val Lys Gly		
500	505	510
Glu Cys Leu Tyr Cys Phe Val Thr Leu Cys Asp Gly His Thr Phe Ser		
515	520	525
Pro Lys Leu Thr Glu Glu Leu Lys Lys Gln Ile Arg Glu Lys Ile Gly		
530	535	540
Pro Ile Ala Thr Pro Asp Tyr Ile Gln Asn Ala Pro Gly Leu Pro Lys		
545	550	555
Thr Arg Ser Gly Lys Ile Met Arg Arg Val Leu Arg Lys Ile Ala Gln		
565	570	575
Asn Asp His Asp Leu Gly Asp Met Ser Thr Val Ala Asp Pro Ser Val		
580	585	590
Ile Ser His Leu Phe Ser His Arg Cys Leu Thr Ile Gln		
595	600	605

&lt;210&gt; 5355

&lt;211&gt; 1596

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5355

agaaagtgcatagaagatgtgatccactttgacctgggaagagaagctctttctcctggct  
60

gatgaggtgtaccaggacaa cgtgtactctccagattgcagattccactccttcaagaag  
120

gtgctgtacgagatggggcccgagtactcgagtaatgtggagcttgctccttccactcc  
180

acctccaagg gctacatggg cgaatgcggc tacagaggag gctacatgga ggtgggtcaat  
240  
ttgcaccccg agatcaaggg ccagctgggtg aagctgctgt cgggtgcgcct gtgcccccca  
300  
gtgtctgggc aggcgcgat ggacattgtt gtgaaccccc cgggtggcagg agaggagtcc  
360  
tttgagcaat tcagccgaga gaaggagtgc gtcttgggta atctggccaa aaaagcaaag  
420  
ctgacggaag acctgtttaa ccaagtccca ggaattcact gcaacccctt gcaggggggc  
480  
atgtacgcct tccctcggat cttcattcct gccaaagctg tggaggctgc tcaggcccat  
540  
caaattggctc cagacatgtt ctactgcatg aagctcctgg aggagactgg catctgtgtc  
600  
gtgcccggca gtggcttttg gcagagggaa ggcacttacc acttcaggat gactatcctc  
660  
cctccagtgg agaagctgaa aacgggtgctg cagaagggtga aagacttcca catcaacttc  
720  
ctggagaagt acgcgtgagg acgcctgagc cccagcggga gacctgtcct tggctcttcc  
780  
tcccaatgcc cgtcaggctg aactcgcctc ccccgtagt ctgcctcggg cctcgcagag  
840  
gccgctggtc acttcgtcat cattttgccc ctggagacgt ctttctttgt gccttgatgt  
900  
tgagagcgcc tctcttttga gcaaacaagc attctatatg caaccagagt agaggggacc  
960  
tgctcagcag gtgtgaccag ggttctctga atctgttatt gtttttgctt ctggaaagt  
1020  
catttggggt ttacaacaac taggatgtgt tgggtgagat gtttcagatc tggagaaatg  
1080  
agcaggtgtc gggaaatgtg tgacttaacc gtggtgaggg ctggaaatcc aaactcacca  
1140  
ccatgatctg tgaaataaag cccttagcgg tgtgaagcat ccggtccttt gaacagaagg  
1200  
gcctggaagg cccctggggc tgagaaaggg tccgcccggg ggcctggagg caggcgccgg  
1260  
gagcgcagta gcacgtggac tgggcaggat gttgcactag cttggggtag atgctggggg  
1320  
ctgcggccac ggtcagaggg cccactgtg aggcgtgggt gtgagccagg ctgcaggagg  
1380  
aactgggcct ccgcttccca gcaacgcagc caggcctgag aattctgtgc gcccggcggg  
1440  
ctttgggaat gaggggttcc cttgaacatg cgtaggctgg aaccccgctc gagaggtctc  
1500  
cctgaatttc agtgacacat agtgcagccc ggcagtgtcc cacttccgtg gagagagccg  
1560  
ctggaatggt gtggacccat cccgcgggtg accggt  
1596

&lt;210&gt; 5356

&lt;211&gt; 245

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5356

Arg Lys Cys Ile Glu Asp Val Ile His Phe Ala Trp Glu Glu Lys Leu  
 1 5 10 15  
 Phe Leu Leu Ala Asp Glu Val Tyr Gln Asp Asn Val Tyr Ser Pro Asp  
 20 25 30  
 Cys Arg Phe His Ser Phe Lys Lys Val Leu Tyr Glu Met Gly Pro Glu  
 35 40 45  
 Tyr Ser Ser Asn Val Glu Leu Ala Ser Phe His Ser Thr Ser Lys Gly  
 50 55 60  
 Tyr Met Gly Glu Cys Gly Tyr Arg Gly Gly Tyr Met Glu Val Val Asn  
 65 70 75 80  
 Leu His Pro Glu Ile Lys Gly Gln Leu Val Lys Leu Leu Ser Val Arg  
 85 90 95  
 Leu Cys Pro Pro Val Ser Gly Gln Ala Ala Met Asp Ile Val Val Asn  
 100 105 110  
 Pro Pro Val Ala Gly Glu Glu Ser Phe Glu Gln Phe Ser Arg Glu Lys  
 115 120 125  
 Glu Ser Val Leu Gly Asn Leu Ala Lys Lys Ala Lys Leu Thr Glu Asp  
 130 135 140  
 Leu Phe Asn Gln Val Pro Gly Ile His Cys Asn Pro Leu Gln Gly Ala  
 145 150 155 160  
 Met Tyr Ala Phe Pro Arg Ile Phe Ile Pro Ala Lys Ala Val Glu Ala  
 165 170 175  
 Ala Gln Ala His Gln Met Ala Pro Asp Met Phe Tyr Cys Met Lys Leu  
 180 185 190  
 Leu Glu Glu Thr Gly Ile Cys Val Val Pro Gly Ser Gly Phe Gly Gln  
 195 200 205  
 Arg Glu Gly Thr Tyr His Phe Arg Met Thr Ile Leu Pro Pro Val Glu  
 210 215 220  
 Lys Leu Lys Thr Val Leu Gln Lys Val Lys Asp Phe His Ile Asn Phe  
 225 230 235 240  
 Leu Glu Lys Tyr Ala  
 245

&lt;210&gt; 5357

&lt;211&gt; 1722

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5357

agtgggatct gtcggcttgt caggtggtgg aggaaaaggc gctccgtcat ggggatccag  
 60  
 acgagccccg tcttgctggc ctccctgggg gtggggctgg tcaactctgct cggcctggct  
 120  
 gtgggctcct acttggttcg gaggtcccg cggcctcagg tcaactctcct ggaccccaat  
 180  
 gaaaagtacc tgctacgact gctagacaag acgactgtga gccacaacac caagaggttc  
 240  
 cgctttgccc tgcccaccgc ccaccacact ctggggctgc ctgtgggcaa acatatctac  
 300  
 ctctccaccc gaattgatgg cagcctgggc atcaggccat acactcctgt caccagtgat  
 360  
 gaggatcaag gctatgtgga tcttgtcatc aaggtctacc tgaagggtgt gcaccccaaa  
 420

tttcctgagg gaggaagat gtctcagtac ctggatagcc tgaagggttg ggatgtggtg  
480  
gagtttcggg ggccaagcgg gttgctcact tacactggaa aagggcattt taacattcag  
540  
cccaacaaga aatctccacc agaaccgccga gtggcgaaga aactgggaat gattgccggc  
600  
gggacaggaa tcacccaat gctacagctg atccgggcca tcctgaaagt ccctgaagat  
660  
ccaaccagct gctttctgct ttttgccaac cagacagaaa aggatatcat cttgcgggag  
720  
gacttagagg aactgcaggc ccgctatccc aatcgcttta agctctgggt cactctggat  
780  
catccccaa aagattgggc ctacagcaag ggctttgtga ctgccgacat gatccgggaa  
840  
cacctgcccg ctccagggga tgatgtgctg gtactgcttt gtgggccacc cccaatggtg  
900  
cagctggcct gccatcccaa cttggacaaa ctgggctact cacaaaagat gcgattcacc  
960  
tactgagcat cctccagctt ccctgggtgct gttcgctgca gttgttcccc atcagtactc  
1020  
aagcactata agccttagat tcctttcctc agagtttcag gttttttcag ttacatctag  
1080  
agctgaaatc tggatagtac ctgcaggaa aatattcctg tagccatgga agagggccaa  
1140  
ggctcagtc ctccttgat ggccctcctaa atctccccgt ggcaacaggc ccaggagagg  
1200  
cccatggagc agtctcttcc atggagtaag aaggaaggga gcatgtacgc ttggtccaag  
1260  
attggctagt tccttgatag catcttactc tcaccttctt tgtgtctgtg atgaaaggaa  
1320  
cagtctgtgc aatgggtttt acttaaaact cactgttcaa cctatgagca aatctgtatg  
1380  
tgtgagtata agttgagcat agcatacttc cagaggtggt cttatggaga tggcaagaaa  
1440  
ggaggaaatg atttcttcag atctcaaagg agtctgaaat atcatatttc tgtgtgtgtc  
1500  
tctctcagcc cctgcccagg ctagagggaa acagctactg ataatcgaat actgctgttt  
1560  
gtggcaggaa cccctggctg tgcaaataaa tggggctgag gccctgtgt gatattgaaa  
1620  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1680  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
1722

&lt;210&gt; 5358

&lt;211&gt; 321

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5358

Ser Gly Ile Cys Arg Leu Val Arg Trp Trp Arg Lys Arg Arg Ser Val  
1 5 10 15  
Met Gly Ile Gln Thr Ser Pro Val Leu Leu Ala Ser Leu Gly Val Gly

	20		25		30										
Leu	Val	Thr	Leu	Leu	Gly	Leu	Ala	Val	Gly	Ser	Tyr	Leu	Val	Arg	Arg
	35		40		45										
Ser	Arg	Arg	Pro	Gln	Val	Thr	Leu	Leu	Asp	Pro	Asn	Glu	Lys	Tyr	Leu
	50		55		60										
Leu	Arg	Leu	Leu	Asp	Lys	Thr	Thr	Val	Ser	His	Asn	Thr	Lys	Arg	Phe
65			70		75			80							
Arg	Phe	Ala	Leu	Pro	Thr	Ala	His	His	Thr	Leu	Gly	Leu	Pro	Val	Gly
	85		90		95										
Lys	His	Ile	Tyr	Leu	Ser	Thr	Arg	Ile	Asp	Gly	Ser	Leu	Val	Ile	Arg
	100		105		110										
Pro	Tyr	Thr	Pro	Val	Thr	Ser	Asp	Glu	Asp	Gln	Gly	Tyr	Val	Asp	Leu
	115		120		125										
Val	Ile	Lys	Val	Tyr	Leu	Lys	Gly	Val	His	Pro	Lys	Phe	Pro	Glu	Gly
	130		135		140										
Gly	Lys	Met	Ser	Gln	Tyr	Leu	Asp	Ser	Leu	Lys	Val	Gly	Asp	Val	Val
145			150		155			160							
Glu	Phe	Arg	Gly	Pro	Ser	Gly	Leu	Leu	Thr	Tyr	Thr	Gly	Lys	Gly	His
	165		170		175										
Phe	Asn	Ile	Gln	Pro	Asn	Lys	Lys	Ser	Pro	Pro	Glu	Pro	Arg	Val	Ala
	180		185		190										
Lys	Lys	Leu	Gly	Met	Ile	Ala	Gly	Gly	Thr	Gly	Ile	Thr	Pro	Met	Leu
	195		200		205										
Gln	Leu	Ile	Arg	Ala	Ile	Leu	Lys	Val	Pro	Glu	Asp	Pro	Thr	Gln	Cys
	210		215		220										
Phe	Leu	Leu	Phe	Ala	Asn	Gln	Thr	Glu	Lys	Asp	Ile	Ile	Leu	Arg	Glu
225			230		235			240							
Asp	Leu	Glu	Glu	Leu	Gln	Ala	Arg	Tyr	Pro	Asn	Arg	Phe	Lys	Leu	Trp
	245		250		255										
Phe	Thr	Leu	Asp	His	Pro	Pro	Lys	Asp	Trp	Ala	Tyr	Ser	Lys	Gly	Phe
	260		265		270										
Val	Thr	Ala	Asp	Met	Ile	Arg	Glu	His	Leu	Pro	Ala	Pro	Gly	Asp	Asp
	275		280		285										
Val	Leu	Val	Leu	Leu	Cys	Gly	Pro	Pro	Pro	Met	Val	Gln	Leu	Ala	Cys
	290		295		300										
His	Pro	Asn	Leu	Asp	Lys	Leu	Gly	Tyr	Ser	Gln	Lys	Met	Arg	Phe	Thr
305			310		315			320							
Tyr															

&lt;210&gt; 5359

&lt;211&gt; 5003

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5359

ncggccggcg gtacgggggt ggtgccgcgc tcctggcccc gcgcgggagg acggcggagg

60

cgcctcccag cctgctatgg gatggatgaa gaagagaacc actatgtctc gcagctcagg

120

gaagtctaca gcagctgcga caccacgggg actggctttc tggaccgcca ggagctgacc

180

cagctctgcc ttaagcttca cctggagcag cagctgcccg tcctcctgca gacgtttctc

240

ggaaacgacc atttcgccag ggttaacttt gaggaattta aggaaggttt tgtggctgtg  
300  
ttgtcttcaa atgctgggtg tgcacctca gatgaagaca gtagttcttt ggaatcagct  
360  
gcctccagtg ccatccctcc aaagtatgtg aatgggttcta agtggatgg cgcgcggagc  
420  
cggcctgagc tatgtgacgc tgccacagaa gccagacgcg tgccggagca gcaaaccag  
480  
gccagcctga aaagtcacct ctggcgctca gcgtctctgg agagcgtgga gagtcccaag  
540  
tcagatgaag aggccgagag cactaaagaa gctcagaatg aattatttga agcacaagga  
600  
cagctgcaga cctgggattc tgaggacttt gggagcccc agaagtcctg cagccctcc  
660  
tttgacacc cagagagcca gatccggggc gtgtgggaag agctgggggt gggcagcagc  
720  
ggacacctga gcgagcagga gctggctgtg gtctgccaga gcgtcgggct ccagggactc  
780  
gagaaagagg aactcgaaga cctgtttaac aaactggatc aagacggaga cggcaaagtg  
840  
agtcttgagg aattccagct tggcctcttc agtcatgagc ccgcgctact tctagagtct  
900  
tccactcggg ttaaaccgag caaggcttgg tctcattacc aggtcccaga ggagagcggc  
960  
tgccacacca ccacaacctc atccctcgtg tccctgtgct ccagcctgcg cctcttctcc  
1020  
agcattgacg atggttcttg cttcgctttt cctgatcagg tcctggccat gtggaccag  
1080  
gaggggattc agaatggcag ggagatcttg cagagcctgg acttcagcgt ggacgagaag  
1140  
gtgaaccttc tggagctgac ctgggccctt gacaacgagc tcatgacagt ggacagtgcc  
1200  
gtccagcagg cagccctggc ctgctaccac caggagctga gctaccagca agggcagggtg  
1260  
gagcagctgg caaggagcgc tgacaaggca aggcaggacc tggagagggc cgagaagagg  
1320  
aacctggagt ttgtgaaaga gatggacgac tgccactcca ccctggagca gctcacggag  
1380  
aagaaaatca agcatctgga gcaggggtac cgggaaaggc tgagcctcct gcggtctgag  
1440  
gtggaggcgg agcgagagct gttctgggag caggcccaca ggcagagggc cgcgctggag  
1500  
tgggacgtgg ggcgcctgca ggctgaggag gctggcctcc gcgagaagct gaccctggcc  
1560  
ctgaaggaaa acagtcgcct acagaaggag attgtggaag tgggtgaaaa gctttcggat  
1620  
tcggagaggc tggccctgaa gctgcagaag gacctggagt ttgtgctgaa ggacaagctg  
1680  
gagccacaga gtgcagagct cctggcccag gaggagcggc tcgcagcagt cctgaaggaa  
1740  
tacgagctca agtgccggga cctgcaggac cgcaacgatg agctgcaagc tgagctggaa  
1800  
ggcctgtggg cgcggctgcc caagaaccgg cacagcccct catggagccc ggatgggcgc  
1860

agacggcagc tccctggact cggcccagca ggcatttcat tcctgggtaa ttctgctcca  
1920  
gtgagtatag aaacggagct gatgatggag caggtaaagg agcattacca agacctcagg  
1980  
accagctgg agaccaaggt aaattactac gaaagggaaa ttgcggcact gaaaaggaac  
2040  
tttgagaagg agaggaagga catggagcag gctcgcaggc gcgaggtcag cgtgctggag  
2100  
ggtcagaagg ccgacctgga ggagctccac gagaagtctc aggaggtcac ctggggcctg  
2160  
caggagcagc tgcaggacac agcccgcggc cccgagcctg agcagatggg cctggcaccc  
2220  
tgctgcaccc aggactgtg tggcctggcc ctgcggcatc acagccacct gcagcagatc  
2280  
aggagagagg ctgaggcgga gctgagtgga gagctgtcgg ggctgggagc cctgcccgt  
2340  
cgcagagacc tgaccttga gctggaggag ccgccgcagg gacctctgcc acgcgggagc  
2400  
cagaggtcgg agcagctgga gctggagagg gcactgaagc tgcagccctg tgcgagcgag  
2460  
aagcgcgccc agatgtgct atcgttggcc ctgcaggagg aggagtga gcttgcgcc  
2520  
gggaagcgag tggacgggcc ctccctggaa gcagagatgc aggccctgcc gaaagatggg  
2580  
ctggtggcag gaagtggcca ggagggcaca cgtggcctcc taccactgcg tccgggctgt  
2640  
ggggagcggc cactggcctg gctggcccca ggtgatggca gagagtctga ggaggcggca  
2700  
ggagccgggc ctgcgccag gcaagcccag gacacagaag ctacgcagag cccggccccc  
2760  
gccccctgcc cggcatccca cggcccctca gagagggtgt cacgcatgca gccctgtgga  
2820  
gtggatgggg atattgtccc aaaggagcca gagcctttcg gcgcgagcgc agcggggctg  
2880  
gagcagcctg gagcccgga gctgcctctg ctgggaacag agagagacgc ctgcgaaacc  
2940  
cagccacgga tgtgggagcc acccctgagg ccggccgctt cgtgcagggg acaggctgag  
3000  
aggctacagg ccattcagga agagcgagca cgaagctgga gcaggggcac ccaggagcag  
3060  
gcctcggagc agcaggcccg ggccgagggc gccctggagc ctgggtgtca caagcacagt  
3120  
gtggaggttg ccaggagagg gtccttgcca tcccacctcc agctcgaga cccgcagggt  
3180  
tcctggcagg agcagcttgc tgccccagaa gagggggaga ccaaaatagc gctggagaga  
3240  
gagaaggatg acatggaaac caaacttcta catctggaag acgtcgtccg ggctctggag  
3300  
aaacatgtag atttgagaga gaacgacaga ctggagtcc atagactttc tgaagaaaac  
3360  
actttgttga aaaacgatct gggaagggtt cggcaagagc ttgaagctgc agaaagtact  
3420  
cacgatgcac agaggaagga aattgaggtt ttaaagaaag acaaggaaaa ggctgctct  
3480



gagatggagg tgctcaacag acagaatcag aactacaagg atcaattatc ccagctcaat  
3540  
gtcagggttc ttcaactggg acaggaggct tctacccacc aggcccaaaa cgaggagcat  
3600  
cgtgtgacca ttcagatggt aacacagagc ctggaggagg tggttcgag tgggcagcag  
3660  
cagagtgacc aaatccaaaa acttagagtt gaacttgaat gcctgaatca ggaacatcag  
3720  
agcctgcagc tgccatggtc agagctgacc cagacccttg aggaaagtca agaccagggtg  
3780  
caggagctc acctgaggct gaggcaggcc caggcccagc acttgagga ggtccggctg  
3840  
gtgccccagg accgtgtggc cgagctgcat cgcttgcag gccttcaggg agagcaggcc  
3900  
aggaggcgcc tggatgcaca gcgggaagaa catgagaaac agctgaaagc cacagaagag  
3960  
cgggtggaag aggcggagat gattctgaag aatatggaaa tgctcctcca agagaaagt  
4020  
gataagctga aggagcagtt tgaaaagaac acgaagtccg acctgctgct gaaggagctg  
4080  
tacgtggaga acgcccacct ggtgagagca cttcaggcca ccgaggagaa gcagcgaggc  
4140  
gccgagaaac aaagccgcct cttggaagaa aaagttcgcg ctctcaacaa actcgtcagt  
4200  
aggattgccc ccgcagccct ctctgtgtaa agacagatta ttttctagga ttcattcgaa  
4260  
agcacatctt ttaaattaag ccactgtgct gccttagatt ccgtgggtca tgagccatga  
4320  
gtcctgggac atctgaggat tgggattctt tgttcacccc gcagatagtt aatgaatggt  
4380  
ctgccctggg caagatggag gtgggggctg ggggaatatg catgttgag aagccggcgt  
4440  
ttttattagc ggtcctgagt aatttccctt ggcaaaattc ccagttttgc cactctctgg  
4500  
agccagatcc tgggagctgt cagcaaggag caggtaagtg agcagttatg gacagcactt  
4560  
tccatgtggt gcttccgacc ctggctgtca gagtgaatg taaagtcagg gctctgtaca  
4620  
gttttgccat ttcactgttc tgctttaagc ttagcttatt agaactcttg gtggagggtg  
4680  
cgtacacaca ttccagaaaa ggcttcactc gctgggaacg tcaaccagc gagaaaggag  
4740  
gggaagcccc ttctccgggg accttatctg tggactcagg aatgatggtg tttattgcaa  
4800  
atgcacaatc tttttcccat tgaaatgtca tcacactgga aattgtacta tatgtaaaaa  
4860  
aaaaaaaaa gtatagtttt atatttgaaa tgtatgcaaa ttatggccat atggctgatt  
4920  
ggaatgtact actgtaatat aaaaagtcac tgtatttgca ataaattctt ttctattaaa  
4980  
attgaaaaa aaaaaaaaaa aaa  
5003

&lt;210&gt; 5360

&lt;211&gt; 1406

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5360

Gly Thr Gly Val Val Pro Arg Ser Trp Pro Arg Ala Gly Gly Arg Arg  
 1 5 10 15  
 Arg Arg Leu Pro Ala Cys Tyr Gly Met Asp Glu Glu Glu Asn His Tyr  
 20 25 30  
 Val Ser Gln Leu Arg Glu Val Tyr Ser Ser Cys Asp Thr Thr Gly Thr  
 35 40 45  
 Gly Phe Leu Asp Arg Gln Glu Leu Thr Gln Leu Cys Leu Lys Leu His  
 50 55 60  
 Leu Glu Gln Gln Leu Pro Val Leu Leu Gln Thr Leu Leu Gly Asn Asp  
 65 70 75 80  
 His Phe Ala Arg Val Asn Phe Glu Glu Phe Lys Glu Gly Phe Val Ala  
 85 90 95  
 Val Leu Ser Ser Asn Ala Gly Val Arg Pro Ser Asp Glu Asp Ser Ser  
 100 105 110  
 Ser Leu Glu Ser Ala Ala Ser Ser Ala Ile Pro Pro Lys Tyr Val Asn  
 115 120 125  
 Gly Ser Lys Trp Tyr Gly Arg Arg Ser Arg Pro Glu Leu Cys Asp Ala  
 130 135 140  
 Ala Thr Glu Ala Arg Arg Val Pro Glu Gln Gln Thr Gln Ala Ser Leu  
 145 150 155 160  
 Lys Ser His Leu Trp Arg Ser Ala Ser Leu Glu Ser Val Glu Ser Pro  
 165 170 175  
 Lys Ser Asp Glu Glu Ala Glu Ser Thr Lys Glu Ala Gln Asn Glu Leu  
 180 185 190  
 Phe Glu Ala Gln Gly Gln Leu Gln Thr Trp Asp Ser Glu Asp Phe Gly  
 195 200 205  
 Ser Pro Gln Lys Ser Cys Ser Pro Ser Phe Asp Thr Pro Glu Ser Gln  
 210 215 220  
 Ile Arg Gly Val Trp Glu Glu Leu Gly Val Gly Ser Ser Gly His Leu  
 225 230 235 240  
 Ser Glu Gln Glu Leu Ala Val Val Cys Gln Ser Val Gly Leu Gln Gly  
 245 250 255  
 Leu Glu Lys Glu Glu Leu Glu Asp Leu Phe Asn Lys Leu Asp Gln Asp  
 260 265 270  
 Gly Asp Gly Lys Val Ser Leu Glu Glu Phe Gln Leu Gly Leu Phe Ser  
 275 280 285  
 His Glu Pro Ala Leu Leu Leu Glu Ser Ser Thr Arg Val Lys Pro Ser  
 290 295 300  
 Lys Ala Trp Ser His Tyr Gln Val Pro Glu Glu Ser Gly Cys His Thr  
 305 310 315 320  
 Thr Thr Thr Ser Ser Leu Val Ser Leu Cys Ser Ser Leu Arg Leu Phe  
 325 330 335  
 Ser Ser Ile Asp Asp Gly Ser Gly Phe Ala Phe Pro Asp Gln Val Leu  
 340 345 350  
 Ala Met Trp Thr Gln Glu Gly Ile Gln Asn Gly Arg Glu Ile Leu Gln  
 355 360 365  
 Ser Leu Asp Phe Ser Val Asp Glu Lys Val Asn Leu Leu Glu Leu Thr  
 370 375 380  
 Trp Ala Leu Asp Asn Glu Leu Met Thr Val Asp Ser Ala Val Gln Gln

385 390 395 400  
Ala Ala Leu Ala Cys Tyr His Gln Glu Leu Ser Tyr Gln Gln Gly Gln  
405 410 415  
Val Glu Gln Leu Ala Arg Glu Arg Asp Lys Ala Arg Gln Asp Leu Glu  
420 425 430  
Arg Ala Glu Lys Arg Asn Leu Glu Phe Val Lys Glu Met Asp Asp Cys  
435 440 445  
His Ser Thr Leu Glu Gln Leu Thr Glu Lys Lys Ile Lys His Leu Glu  
450 455 460  
Gln Gly Tyr Arg Glu Arg Leu Ser Leu Leu Arg Ser Glu Val Glu Ala  
465 470 475 480  
Glu Arg Glu Leu Phe Trp Glu Gln Ala His Arg Gln Arg Ala Ala Leu  
485 490 495  
Glu Trp Asp Val Gly Arg Leu Gln Ala Glu Glu Ala Gly Leu Arg Glu  
500 505 510  
Lys Leu Thr Leu Ala Leu Lys Glu Asn Ser Arg Leu Gln Lys Glu Ile  
515 520 525  
Val Glu Val Val Glu Lys Leu Ser Asp Ser Glu Arg Leu Ala Leu Lys  
530 535 540  
Leu Gln Lys Asp Leu Glu Phe Val Leu Lys Asp Lys Leu Glu Pro Gln  
545 550 555 560  
Ser Ala Glu Leu Leu Ala Gln Glu Glu Arg Phe Ala Ala Val Leu Lys  
565 570 575  
Glu Tyr Glu Leu Lys Cys Arg Asp Leu Gln Asp Arg Asn Asp Glu Leu  
580 585 590  
Gln Ala Glu Leu Glu Gly Leu Trp Ala Arg Leu Pro Lys Asn Arg His  
595 600 605  
Ser Pro Ser Trp Ser Pro Asp Gly Arg Arg Arg Gln Leu Pro Gly Leu  
610 615 620  
Gly Pro Ala Gly Ile Ser Phe Leu Gly Asn Ser Ala Pro Val Ser Ile  
625 630 635 640  
Glu Thr Glu Leu Met Met Glu Gln Val Lys Glu His Tyr Gln Asp Leu  
645 650 655  
Arg Thr Gln Leu Glu Thr Lys Val Asn Tyr Tyr Glu Arg Glu Ile Ala  
660 665 670  
Ala Leu Lys Arg Asn Phe Glu Lys Glu Arg Lys Asp Met Glu Gln Ala  
675 680 685  
Arg Arg Arg Glu Val Ser Val Leu Glu Gly Gln Lys Ala Asp Leu Glu  
690 695 700  
Glu Leu His Glu Lys Ser Gln Glu Val Ile Trp Gly Leu Gln Glu Gln  
705 710 715 720  
Leu Gln Asp Thr Ala Arg Gly Pro Glu Pro Glu Gln Met Gly Leu Ala  
725 730 735  
Pro Cys Cys Thr Gln Ala Leu Cys Gly Leu Ala Leu Arg His His Ser  
740 745 750  
His Leu Gln Gln Ile Arg Arg Glu Ala Glu Ala Glu Leu Ser Gly Glu  
755 760 765  
Leu Ser Gly Leu Gly Ala Leu Pro Ala Arg Arg Asp Leu Thr Leu Glu  
770 775 780  
Leu Glu Glu Pro Pro Gln Gly Pro Leu Pro Arg Gly Ser Gln Arg Ser  
785 790 795 800  
Glu Gln Leu Glu Leu Glu Arg Ala Leu Lys Leu Gln Pro Cys Ala Ser  
805 810 815  
Glu Lys Arg Ala Gln Met Cys Val Ser Leu Ala Leu Glu Glu Glu Glu

			820					825					830		
Leu	Glu	Leu	Ala	Arg	Gly	Lys	Arg	Val	Asp	Gly	Pro	Ser	Leu	Glu	Ala
		835					840					845			
Glu	Met	Gln	Ala	Leu	Pro	Lys	Asp	Gly	Leu	Val	Ala	Gly	Ser	Gly	Gln
	850					855					860				
Glu	Gly	Thr	Arg	Gly	Leu	Leu	Pro	Leu	Arg	Pro	Gly	Cys	Gly	Glu	Arg
865					870					875					880
Pro	Leu	Ala	Trp	Leu	Ala	Pro	Gly	Asp	Gly	Arg	Glu	Ser	Glu	Glu	Ala
			885						890					895	
Ala	Gly	Ala	Gly	Pro	Arg	Arg	Arg	Gln	Ala	Gln	Asp	Thr	Glu	Ala	Thr
		900						905					910		
Gln	Ser	Pro	Ala	Pro	Ala	Pro	Ala	Pro	Ala	Ser	His	Gly	Pro	Ser	Glu
	915					920						925			
Arg	Trp	Ser	Arg	Met	Gln	Pro	Cys	Gly	Val	Asp	Gly	Asp	Ile	Val	Pro
930					935						940				
Lys	Glu	Pro	Glu	Pro	Phe	Gly	Ala	Ser	Ala	Ala	Gly	Leu	Glu	Gln	Pro
945					950					955					960
Gly	Ala	Arg	Glu	Leu	Pro	Leu	Leu	Gly	Thr	Glu	Arg	Asp	Ala	Ser	Gln
			965						970					975	
Thr	Gln	Pro	Arg	Met	Trp	Glu	Pro	Pro	Leu	Arg	Pro	Ala	Ala	Ser	Cys
		980						985					990		
Arg	Gly	Gln	Ala	Glu	Arg	Leu	Gln	Ala	Ile	Gln	Glu	Glu	Arg	Ala	Arg
	995					1000					1005				
Ser	Trp	Ser	Arg	Gly	Thr	Gln	Glu	Gln	Ala	Ser	Glu	Gln	Gln	Ala	Arg
1010						1015					1020				
Ala	Glu	Gly	Ala	Leu	Glu	Pro	Gly	Cys	His	Lys	His	Ser	Val	Glu	Val
1025					1030					1035					1040
Ala	Arg	Arg	Gly	Ser	Leu	Pro	Ser	His	Leu	Gln	Leu	Ala	Asp	Pro	Gln
			1045						1050					1055	
Gly	Ser	Trp	Gln	Glu	Gln	Leu	Ala	Ala	Pro	Glu	Glu	Gly	Glu	Thr	Lys
			1060					1065					1070		
Ile	Ala	Leu	Glu	Arg	Glu	Lys	Asp	Asp	Met	Glu	Thr	Lys	Leu	Leu	His
	1075						1080					1085			
Leu	Glu	Asp	Val	Val	Arg	Ala	Leu	Glu	Lys	His	Val	Asp	Leu	Arg	Glu
1090						1095					1100				
Asn	Asp	Arg	Leu	Glu	Phe	His	Arg	Leu	Ser	Glu	Glu	Asn	Thr	Leu	Leu
1105					1110					1115					1120
Lys	Asn	Asp	Leu	Gly	Arg	Val	Arg	Gln	Glu	Leu	Glu	Ala	Ala	Glu	Ser
			1125						1130					1135	
Thr	His	Asp	Ala	Gln	Arg	Lys	Glu	Ile	Glu	Val	Leu	Lys	Lys	Asp	Lys
			1140					1145					1150		
Glu	Lys	Ala	Cys	Ser	Glu	Met	Glu	Val	Leu	Asn	Arg	Gln	Asn	Gln	Asn
	1155						1160				1165				
Tyr	Lys	Asp	Gln	Leu	S										

1250 1255 1260  
 Arg Gln Ala Gln Ala Gln His Leu Gln Glu Val Arg Leu Val Pro Gln  
 1265 1270 1275 1280  
 Asp Arg Val Ala Glu Leu His Arg Leu Leu Ser Leu Gln Gly Glu Gln  
 1285 1290 1295  
 Ala Arg Arg Arg Leu Asp Ala Gln Arg Glu Glu His Glu Lys Gln Leu  
 1300 1305 1310  
 Lys Ala Thr Glu Glu Arg Val Glu Glu Ala Glu Met Ile Leu Lys Asn  
 1315 1320 1325  
 Met Glu Met Leu Leu Gln Glu Lys Val Asp Lys Leu Lys Glu Gln Phe  
 1330 1335 1340  
 Glu Lys Asn Thr Lys Ser Asp Leu Leu Leu Lys Glu Leu Tyr Val Glu  
 1345 1350 1355 1360  
 Asn Ala His Leu Val Arg Ala Leu Gln Ala Thr Glu Glu Lys Gln Arg  
 1365 1370 1375  
 Gly Ala Glu Lys Gln Ser Arg Leu Leu Glu Glu Lys Val Arg Ala Leu  
 1380 1385 1390  
 Asn Lys Leu Val Ser Arg Ile Ala Pro Ala Ala Leu Ser Val  
 1395 1400 1405

<210> 5361  
 <211> 1080  
 <212> DNA  
 <213> Homo sapiens

<400> 5361  
 nngaattcct ctccaaagca gactacgtca agttttccct ggtgtcagac agcatttcac  
 60  
 catgaaaccc taagacctgc ctctgggct ccttccagct ggtgggctg gtgtgaagg  
 120  
 gggcttcctg ggcctccggc agatggagga tggcattaaa tgccaacaca gtcagcttac  
 180  
 catccacaag gccagcagct gccaacagct gccctagacc tatcaacaag acaacttcat  
 240  
 ggctcccaat gggaatggag gctgggcccgc ccctacttag agcaggggaa agaacttttc  
 300  
 cctcaaagag ccggggcagg atgccagaat ctaactacat cctctcccgc tttgcagttc  
 360  
 taggaagtgg aatttgctgc cctaggcgtg gtctaaagga caagtttaga aatgattcaa  
 420  
 ctcaagttcc taaacagagt aagtgccagt tgatgtccca ccgtggatcc tttactccag  
 480  
 aaaaattgta atgatggctc ggccaccgcc ttggctagag tcccactgca cgcgtgtcgt  
 540  
 gagggccgat gggcaagtcc gtccggtttt tttgttgtt gttgttgtt tttgagatgg  
 600  
 agtctcgccc tgnttgccc gactgaagtg caaaggccc atctcaactc actgcaacct  
 660  
 ccgcctcctg ggttcaaagg attctcctgt ctacgcctcc tgagtagctg ggattacagg  
 720  
 caccgccag cagccccagc ttttttttgt attttttagta gagacggggt tttatcatgt  
 780  
 tgccaggct ggtctcgaac gcctgacctc atgnnatcca ccgccttgg cctcccaa  
 840

tgctgggacc acaggcgtga gccaccgcgc ccggccgtct gtctgggtttt caaaccaatc  
 900  
 aatgaacccg taagcctctt tggtatatat aacaatgaaa aaattcatta agccatgaaa  
 960  
 tctagaaata agtcatattt ctgagttgat aaaatgcttt tctgaacata catttttaggt  
 1020  
 atctgggcgt gctggcgggt gcctgtaatc ccagctactc ggggaggctt gagacaggga  
 1080

<210> 5362  
 <211> 165  
 <212> PRT  
 <213> Homo sapiens

<400> 5362  
 Cys Pro Thr Val Asp Pro Leu Leu Gln Lys Asn Cys Asn Asp Gly Ser  
 1 5 10 15  
 Ala Thr Ala Leu Ala Arg Val Pro Leu His Ala Cys Arg Glu Gly Arg  
 20 25 30  
 Trp Ala Ser Pro Ser Gly Phe Phe Cys Cys Cys Cys Phe Leu Arg  
 35 40 45  
 Trp Ser Leu Ala Leu Xaa Ala Gln Thr Glu Val Gln Arg Pro Asp Leu  
 50 55 60  
 Asn Ser Leu Gln Pro Pro Pro Pro Gly Phe Lys Gly Phe Ser Cys Leu  
 65 70 75 80  
 Ser Leu Leu Ser Ser Trp Asp Tyr Arg His Pro Pro Ala Arg Pro Ala  
 85 90 95  
 Phe Phe Cys Ile Phe Ser Arg Asp Gly Val Leu Ser Cys Trp Pro Gly  
 100 105 110  
 Trp Ser Arg Thr Pro Asp Leu Met Xaa Ser Thr Arg Leu Gly Leu Pro  
 115 120 125  
 Asn Cys Trp Asp His Arg Arg Glu Pro Pro Arg Pro Ala Val Cys Leu  
 130 135 140  
 Val Phe Lys Pro Ile Asn Glu Pro Val Ser Leu Phe Gly Ile Tyr Asn  
 145 150 155 160  
 Asn Glu Lys Ile His  
 165

<210> 5363  
 <211> 894  
 <212> DNA  
 <213> Homo sapiens

<400> 5363  
 cggccggcgc gggcccctgg cgggcgggcg gtacagcccc aagcctgaga cccggacctg  
 60  
 agcatcgag gtctgagtcg cggccgcct ggggcgaagc cgggggtggc ggcgacctcg  
 120  
 cggcggttga ccggctctgt gagcacctcc cctctgagca ctcccttgt gacaggccac  
 180  
 ttcccttgtg acaggcccag gacgaggtgg ccaggcggcc cccatggcgt ccctgggtcta  
 240  
 ggcgagagaac cgcctgggcg atgagtgaga acctcgacaa cgagggcccg aagcccatgg  
 300

agagctgtgg ccaggagagc agcagtggcc tgagctggcc taccgtctcg gtgccccctg  
 360  
 cagccccggc agccctggag gaggtggaga aagagggcgc tggggcggct acagggcncg  
 420  
 gggcctcagc ccgggctcta cagctacatc agggatgact tgtttacctc tgagatcttt  
 480  
 aaactggagc tgcagaacgc gcctcgccac gccagcttca gcgacgtccg gcgcttcctg  
 540  
 ggccgctttg gtctgcagcc ccacaaaacc aaactctttg ggcaaccacc ctgcgccttt  
 600  
 gtgacattcc gcagcgctgc agagagggac aaggccctgc gcgttttgca tggtgccctc  
 660  
 tggaaaggcc gcccaactcag tgtggcctgg cccggcccaa ggccgacccc atggccagga  
 720  
 ggaggcngac aggaggggtga gagtgagcca ccagtaacac gangtggccg acgtggtgac  
 780  
 ccctctatgg acagtgcctt antgctgagc agcttgagcg gaagcagctg gagtgcgagc  
 840  
 aggtgctgca gaaacnttgc ccaggaaatc gggagcacca accgtgcctt gcgt  
 894

<210> 5364

<211> 187

<212> PRT

<213> Homo sapiens

<400> 5364

Ala	Ala	Leu	Pro	Ser	Arg	Cys	Pro	Leu	Gln	Pro	Arg	Gln	Pro	Trp	Arg
1				5					10					15	
Arg	Trp	Arg	Lys	Arg	Ala	Leu	Gly	Arg	Leu	Gln	Gly	Xaa	Gly	Pro	Gln
			20					25					30		
Pro	Gly	Leu	Tyr	Ser	Tyr	Ile	Arg	Asp	Asp	Leu	Phe	Thr	Ser	Glu	Ile
		35				40						45			
Phe	Lys	Leu	Glu	Leu	Gln	Asn	Ala	Pro	Arg	His	Ala	Ser	Phe	Ser	Asp
	50					55					60				
Val	Arg	Arg	Phe	Leu	Gly	Arg	Phe	Gly	Leu	Gln	Pro	His	Lys	Thr	Lys
65					70					75				80	
Leu	Phe	Gly	Gln	Pro	Pro	Cys	Ala	Phe	Val	Thr	Phe	Arg	Ser	Ala	Ala
			85						90					95	
Glu	Arg	Asp	Lys	Ala	Leu	Arg	Val	Leu	His	Gly	Ala	Leu	Trp	Lys	Gly
			100						105					110	
Arg	Pro	Leu	Ser	Val	Ala	Trp	Pro	Gly	Pro	Arg	Pro	Thr	Pro	Trp	Pro
		115						120					125		
Gly	Gly	Gly	Xaa	Gln	Glu	Gly	Glu	Ser	Glu	Pro	Pro	Val	Thr	Arg	Xaa
		130					135						140		
Gly	Arg	Arg	Gly	Asp	Pro	Ser	Met	Asp	Ser	Ala	Leu	Xaa	Leu	Ser	Ser
145					150					155				160	
Leu	Ser	Gly	Ser	Ser	Trp	Ser	Ala	Ser	Arg	Cys	Cys	Arg	Asn	Xaa	Ala
			165						170					175	
Gln	Glu	Ile	Gly	Ser	Thr	Asn	Arg	Ala	Leu	Arg					
			180						185						

<210> 5365

<211> 1824

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5365

cagcctttcc cggcagcgag cgctcggcca ggtgcactag gcgctgtgcy ggccccctt  
60  
ccccgcgagt ccctcaagcg ggaacctgcc tcgtgtctcc caggagccat ggaggctgtg  
120  
gaactcgcca gaaaactgca ggaggaagct acgtgctcca tctgtctgga ttacttcaca  
180  
gacctgtga tgaccacctg tggccacaac ttctgccgag cctgcatcca gctgagctgg  
240  
gaaaaggcga ggggcaagaa ggggaggcgg aagcgggaagg gctccttccc ctgccccgag  
300  
tgcagagaga tgtccccgca gaggaacctg ctgccaacc ggctgctgac caagggtggc  
360  
gagatggcgc agcagcatcc tggctctgcag aagcaagacc tgtgccagga gcaccacgag  
420  
cccctcaagc ttttctgcca gaaggaccag agccccatct gtgtggtgtg caggaggtcc  
480  
cgggagcacc ggctgcacag ggtgctgccc gccgaggagg cagtgcaggg gtacaagttg  
540  
aagctggagg aggacatgga gtaccttcgg gagcagatca ccaggacagg gaatctgcag  
600  
gccagggagg agcagagctt agccgagtgg cagggcaagg tgaaggagcg gagagaacgc  
660  
attgtgctgg agtttgagaa gatgaacctc tacctggtgg aagaagagca gaggctctc  
720  
caggctctgg agacggaaga agaggagact gccagcaggc tccgggagag cgtggcctgc  
780  
ctggaccggc agggtcactc tctggagctg ctgctgctgc agctggagga gcggagcaca  
840  
caggggcccc tccagatgct gcaggacatg aaggaacccc tgagcaggaa gaacaacgtg  
900  
agtgtgcagt gccagaggt tggcccccca accagaccca ggactgtgtg cagagttccc  
960  
ggacagattg aagtgctaag aggctttcta gaggatgtgg tgcctgatgc cacctccgcy  
1020  
taccctacc tcctcctgta tgagagccgc cagaggcgct acctcggctc ttcgccggag  
1080  
ggcagtgggt tctgcagcaa ggaccgattt gtggcttacc cctgtgctgt gggccagacg  
1140  
gcctttctct ctgggaggca ctactgggag gtgggcatga acatcaccgg ggacgcgttg  
1200  
tgggccctgg gtgtgtgcag ggacaacgtg agccggaaag acagggtcct caagtgcccc  
1260  
gaaaacggct tctgggtggt gcagctgtcc aaggggacca agtacttatc caccttctct  
1320  
gccctaacc cggtcatgct gatggagcct ccagccaca tgggcatctt cctggacttc  
1380  
gaagccgggg aagtgtcctt ctacagtgtg agcgatgggt cccacctgca cacctactcc  
1440  
caggccacct tcccaggccc cctgcagcct ttcttctgcc tgggggctcc gaagtctggt  
1500



cagatgggtca tctccacagt gaccatgtgg gtgaaaggat agacacagac cgggggactc  
 1560  
 gggcactgct cctggctctg cagaagggtgt gggccttctg cttactgcag gccacctgcc  
 1620  
 aggggttctct ggcacacgc tggcagccat tagacacaca ggggggtttc tcaaattcta  
 1680  
 aatataattg tgattagaac tgtcaaacat taagagggta tactgacaga tgcttcctag  
 1740  
 aggaaacttt tgaaagcccc tgcgttctga gtggaccgat ttctaaatcc atacctacac  
 1800  
 accaaaaaaaa aaaaaaagtc gagc  
 1824

<210> 5366

<211> 477

<212> PRT

<213> Homo sapiens

<400> 5366

Met	Glu	Ala	Val	Glu	Leu	Ala	Arg	Lys	Leu	Gln	Glu	Glu	Ala	Thr	Cys	1	5	10	15
Ser	Ile	Cys	Leu	Asp	Tyr	Phe	Thr	Asp	Pro	Val	Met	Thr	Thr	Cys	Gly	20	25	30	
His	Asn	Phe	Cys	Arg	Ala	Cys	Ile	Gln	Leu	Ser	Trp	Glu	Lys	Ala	Arg	35	40	45	
Gly	Lys	Lys	Gly	Arg	Arg	Lys	Arg	Lys	Gly	Ser	Phe	Pro	Cys	Pro	Glu	50	55	60	
Cys	Arg	Glu	Met	Ser	Pro	Gln	Arg	Asn	Leu	Leu	Pro	Asn	Arg	Leu	Leu	65	70	75	80
Thr	Lys	Val	Ala	Glu	Met	Ala	Gln	Gln	His	Pro	Gly	Leu	Gln	Lys	Gln	85	90	95	
Asp	Leu	Cys	Gln	Glu	His	His	Glu	Pro	Leu	Lys	Leu	Phe	Cys	Gln	Lys	100	105	110	
Asp	Gln	Ser	Pro	Ile	Cys	Val	Val	Cys	Arg	Glu	Ser	Arg	Glu	His	Arg	115	120	125	
Leu	His	Arg	Val	Leu	Pro	Ala	Glu	Glu	Ala	Val	Gln	Gly	Tyr	Lys	Leu	130	135	140	
Lys	Leu	Glu	Glu	Asp	Met	Glu	Tyr	Leu	Arg	Glu	Gln	Ile	Thr	Arg	Thr	145	150	155	160
Gly	Asn	Leu	Gln	Ala	Arg	Glu	Glu	Gln	Ser	Leu	Ala	Glu	Trp	Gln	Gly	165	170	175	
Lys	Val	Lys	Glu	Arg	Arg	Glu	Arg	Ile	Val	Leu	Glu	Phe	Glu	Lys	Met	180	185	190	
Asn	Leu	Tyr	Leu	Val	Glu	Glu	Glu	Gln	Arg	Leu	Leu	Gln	Ala	Leu	Glu	195	200	205	
Thr	Glu	Glu	Glu	Glu	Thr	Ala	Ser	Arg	Leu	Arg	Glu	Ser	Val	Ala	Cys	210	215	220	
Leu	Asp	Arg	Gln	Gly	His	Ser	Leu	Glu	Leu	Leu	Leu	Gln	Leu	Glu		225	230	235	240
Glu	Arg	Ser	Thr	Gln	Gly	Pro	Leu	Gln	Met	Leu	Gln	Asp	Met	Lys	Glu	245	250	255	
Pro	Leu	Ser	Arg	Lys	Asn	Asn	Val	Ser	Val	Gln	Cys	Pro	Glu	Val	Ala	260	265	270	
Pro	Pro	Thr	Arg	Pro	Arg	Thr	Val	Cys	Arg	Val	Pro	Gly	Gln	Ile	Glu				

275 280 285  
 Val Leu Arg Gly Phe Leu Glu Asp Val Val Pro Asp Ala Thr Ser Ala  
 290 295 300  
 Tyr Pro Tyr Leu Leu Leu Tyr Glu Ser Arg Gln Arg Arg Tyr Leu Gly  
 305 310 315 320  
 Ser Ser Pro Glu Gly Ser Gly Phe Cys Ser Lys Asp Arg Phe Val Ala  
 325 330 335  
 Tyr Pro Cys Ala Val Gly Gln Thr Ala Phe Ser Ser Gly Arg His Tyr  
 340 345 350  
 Trp Glu Val Gly Met Asn Ile Thr Gly Asp Ala Leu Trp Ala Leu Gly  
 355 360 365  
 Val Cys Arg Asp Asn Val Ser Arg Lys Asp Arg Val Leu Lys Cys Pro  
 370 375 380  
 Glu Asn Gly Phe Trp Val Val Gln Leu Ser Lys Gly Thr Lys Tyr Leu  
 385 390 395 400  
 Ser Thr Phe Ser Ala Leu Thr Pro Val Met Leu Met Glu Pro Pro Ser  
 405 410 415  
 His Met Gly Ile Phe Leu Asp Phe Glu Ala Gly Glu Val Ser Phe Tyr  
 420 425 430  
 Ser Val Ser Asp Gly Ser His Leu His Thr Tyr Ser Gln Ala Thr Phe  
 435 440 445  
 Pro Gly Pro Leu Gln Pro Phe Phe Cys Leu Gly Ala Pro Lys Ser Gly  
 450 455 460  
 Gln Met Val Ile Ser Thr Val Thr Met Trp Val Lys Gly  
 465 470 475

&lt;210&gt; 5367

&lt;211&gt; 549

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5367

nntcctcttc cccctcattc tcttccccct cgtcttcagg aggccggtgg gcaggagctg  
 60  
 ggatctcggg tggctgcatg cgtgtctcct tgggggaagt ctcgggggaa gtaggctgtg  
 120  
 gagtctcagg ggctggggat gctgcccccg aagcccccta cttttgggga gttcctgtcc  
 180  
 cagcaciaag ctgaggccag cagccgca ga aggagaaaga gcagtcggcc ccaggccaag  
 240  
 gcagcgccca gggcctacag tgacctgat gaccgctggg agacaaaaga aggggcagca  
 300  
 tccccagccc ctgagactcc acagcctact tcccccgaga cttcccccaa ggagacaccc  
 360  
 atgcagccac ccgagatccc agctcctgcc caccggcctc ctgaagacga gggggaagag  
 420  
 aatgaggggg aagaggatga agaattgggag gacataagtg aggatgagga agaggaggag  
 480  
 atcgaggtgg aagaaggtga tgaggaggaa ccagcccaag accaccaagc cccagaggct  
 540  
 gccccacc  
 549

&lt;210&gt; 5368

<211> 137  
 <212> PRT  
 <213> Homo sapiens

<400> 5368  
 Met Leu Pro Pro Lys Pro Pro Thr Phe Gly Glu Phe Leu Ser Gln His  
   1                  5                  10                  15  
 Lys Ala Glu Ala Ser Ser Arg Arg Arg Arg Lys Ser Ser Arg Pro Gln  
           20                  25                  30  
 Ala Lys Ala Ala Pro Arg Ala Tyr Ser Asp His Asp Asp Arg Trp Glu  
       35                  40                  45  
 Thr Lys Glu Gly Ala Ala Ser Pro Ala Pro Glu Thr Pro Gln Pro Thr  
   50                  55                  60  
 Ser Pro Glu Thr Ser Pro Lys Glu Thr Pro Met Gln Pro Pro Glu Ile  
 65                  70                  75                  80  
 Pro Ala Pro Ala His Arg Pro Pro Glu Asp Glu Gly Glu Glu Asn Glu  
           85                  90                  95  
 Gly Glu Glu Asp Glu Glu Trp Glu Asp Ile Ser Glu Asp Glu Glu Glu  
           100                  105                  110  
 Glu Glu Ile Glu Val Glu Glu Gly Asp Glu Glu Glu Pro Ala Gln Asp  
       115                  120                  125  
 His Gln Ala Pro Glu Ala Ala Pro Thr  
       130                  135

<210> 5369  
 <211> 646  
 <212> DNA  
 <213> Homo sapiens

<400> 5369  
 ngggaggcgg gaggcgcggc cgccgctcca gctgcgagtc cgcccgccgc ccgcccgcgc  
 60  
 cgccgcgcgc tcggtccgc gcccgccatg gccgcctga cggagagcga ggcgcgcgg  
 120  
 cagcagcagc agctcctgca gccgcggccc tcgcccgtgg gcagcagcgg gcccgagccc  
 180  
 cccggggggc agcccgacgg catgaaggac ctggacgcca tcaaactctt cgtgggcccag  
 240  
 atcccgcggc acctggacga gaaggacctc aagccgctct tcgagcagtt cggccgcctc  
 300  
 tacgagctca cgggtgctcaa agaccctac acgggggatgc acaaagggtgg gcgcccggcc  
 360  
 cctccccccc tctccccctc cctccgcctc ccaccccacc ttccggcctc ttctctcccc  
 420  
 catcaccatc cctcctctgc tcacctcct cctctgctg cctctgccgg agcatcggtt  
 480  
 cttacccctt cctccccacc caccctcct cctctctctg ggggtgcagc tgacagatcc  
 540  
 ggcggggccc cctccccctc tcgccccct cctcctcct cccaccttc cggcatctcc  
 600  
 tctctctctc cctctctctc tccctctctc tctcccttc tcttct  
 646

<210> 5370

<211> 148  
 <212> PRT  
 <213> Homo sapiens

<400> 5370  
 Met Lys Asp Leu Asp Ala Ile Lys Leu Phe Val Gly Gln Ile Pro Arg  
 1 5 10 15  
 His Leu Asp Glu Lys Asp Leu Lys Pro Leu Phe Glu Gln Phe Gly Arg  
 20 25 30  
 Ile Tyr Glu Leu Thr Val Leu Lys Asp Pro Tyr Thr Gly Met His Lys  
 35 40 45  
 Gly Gly Arg Pro Ala Pro Ser Pro Leu Ser Pro Ser Leu Arg Leu Pro  
 50 55 60  
 Pro His Leu Pro Ala Ser Ser Leu Pro His His His Pro Ser Ser Ala  
 65 70 75 80  
 His Leu Pro Pro Leu Pro Ala Ser Ala Gly Ala Ser Val Leu Thr Pro  
 85 90 95  
 Ser Leu Pro Pro Thr Pro Pro Pro Leu Ser Gly Gly Ala Ala Asp Arg  
 100 105 110  
 Ser Glu Arg Ala Pro Ser Pro Pro Pro Pro Pro Leu Pro Pro Ser Pro  
 115 120 125  
 Pro Ser Gly Ile Ser Ser Leu Ser Pro Ser Leu Ser Pro Ser Leu Ser  
 130 135 140  
 Pro Phe Leu Phe  
 145

<210> 5371  
 <211> 1177  
 <212> DNA  
 <213> Homo sapiens

<400> 5371  
 nnacacagtg ccagcgccct catgtaccac cggaacgaga gcctacagcc cagcctgcag  
 60  
 agcccgcaaa cggagctgcg gtcggacttc cagtgcgttg tgggcttcgg gggcattcac  
 120  
 tccacgcgt ccactgtcct cagcgaccag gccagtatc taaaccctt actgggagag  
 180  
 tggaagcact tcaactgcct cctggcccc cgcatgtcca accagggcat cgcggtgctc  
 240  
 aacaacttcg tatacttgat tggaggggac aacaatgtcc aaggatttcg agcagagtcc  
 300  
 cgatgctgga ggtatgaccc acggcacaac cgctggnttc cagatccagt ccctgcagca  
 360  
 ggagcacgcc gacctgtcnn cgtgtgtgtt gtaggcaggt acatctacgc tgtggcgggc  
 420  
 cgtgactacc acaatgacct gaatgctgtg gagcgctacg accctgccac caactcctgg  
 480  
 gcatacgtgg cccactcaa gagggaggtg tatgccacg caggcgcgac gctggagggg  
 540  
 aagatgtata tcacctgcgg ccgcagaggg gaggattacc tgaaagagac aactgctac  
 600  
 gatccaggca gcaacacttg gcacacactg gctgatgggc ctgtgcggcg cgctggcac  
 660

ggcatggcaa ccctcctcaa caagctgtat gtgatcgggg gcagcaacaa cgatgccgga  
 720  
 tacaggaggg acgtgcacca ggtggcctgc tacagctgca cgtctggaca gtggtcatct  
 780  
 gtctgcccac tccctgctgg gcacggtgag cctggcattg ctgtgctgga caacaggatc  
 840  
 tatgtgttag gtggccgctc acacaaccgc ggcagccgca caggctacgt gcacatttac  
 900  
 gatgtggaga aggactgctg ggaggaaggg cccagctgg acaactccat ctcaggcctg  
 960  
 gcggcctgtg tgetcaccct gcccgcctcc ctgctccttg agccgccccg cgggaccct  
 1020  
 gaccgcagcc aggcgcagcc ggactttgcc tctgaggtga tgagtgtgtc tgactgggag  
 1080  
 gagtttgaca actccagtga ggactaggct ccctgtgcct ggcatcagag ggaagggagg  
 1140  
 ctggggctgc agggcagtga aaccacgca gcctagg  
 1177

<210> 5372

<211> 368

<212> PRT

<213> Homo sapiens

<400> 5372

Xaa	His	Ser	Ala	Ser	Ala	Leu	Met	Tyr	His	Arg	Asn	Glu	Ser	Leu	Gln
1				5					10					15	
Pro	Ser	Leu	Gln	Ser	Pro	Gln	Thr	Glu	Leu	Arg	Ser	Asp	Phe	Gln	Cys
			20					25					30		
Val	Val	Gly	Phe	Gly	Gly	Ile	His	Ser	Thr	Pro	Ser	Thr	Val	Leu	Ser
			35				40					45			
Asp	Gln	Ala	Lys	Tyr	Leu	Asn	Pro	Leu	Leu	Gly	Glu	Trp	Lys	His	Phe
			50			55				60					
Thr	Ala	Ser	Leu	Ala	Pro	Arg	Met	Ser	Asn	Gln	Gly	Ile	Ala	Val	Leu
65					70				75					80	
Asn	Asn	Phe	Val	Tyr	Leu	Ile	Gly	Gly	Asp	Asn	Asn	Val	Gln	Gly	Phe
			85					90					95		
Arg	Ala	Glu	Ser	Arg	Cys	Trp	Arg	Tyr	Asp	Pro	Arg	His	Asn	Arg	Trp
			100					105				110			
Xaa	Pro	Asp	Pro	Val	Pro	Ala	Ala	Gly	Ala	Arg	Arg	Pro	Val	Xaa	Val
			115				120					125			
Cys	Val	Val	Gly	Arg	Tyr	Ile	Tyr	Ala	Val	Ala	Gly	Arg	Asp	Tyr	His
			130			135				140					
Asn	Asp	Leu	Asn	Ala	Val	Glu	Arg	Tyr	Asp	Pro	Ala	Thr	Asn	Ser	Trp
145					150				155					160	
Ala	Tyr	Val	Ala	Pro	Leu	Lys	Arg	Glu	Val	Tyr	Ala	His	Ala	Gly	Ala
				165					170					175	
Thr	Leu	Glu	Gly	Lys	Met	Tyr	Ile	Thr	Cys	Gly	Arg	Arg	Gly	Glu	Asp
			180					185					190		
Tyr	Leu	Lys	Glu	Thr	His	Cys	Tyr	Asp	Pro	Gly	Ser	Asn	Thr	Trp	His
			195				200					205			
Thr	Leu	Ala	Asp	Gly	Pro	Val	Arg	Arg	Ala	Trp	His	Gly	Met	Ala	Thr
			210			215						220			
Leu	Leu	Asn	Lys	Leu	Tyr	Val	Ile	Gly	Gly	Ser	Asn	Asn	Asp	Ala	Gly

```

225          230          235          240
Tyr Arg Arg Asp Val His Gln Val Ala Cys Tyr Ser Cys Thr Ser Gly
          245          250          255
Gln Trp Ser Ser Val Cys Pro Leu Pro Ala Gly His Gly Glu Pro Gly
          260          265          270
Ile Ala Val Leu Asp Asn Arg Ile Tyr Val Leu Gly Gly Arg Ser His
          275          280          285
Asn Arg Gly Ser Arg Thr Gly Tyr Val His Ile Tyr Asp Val Glu Lys
          290          295          300
Asp Cys Trp Glu Glu Gly Pro Gln Leu Asp Asn Ser Ile Ser Gly Leu
305          310          315          320
Ala Ala Cys Val Leu Thr Leu Pro Arg Ser Leu Leu Leu Glu Pro Pro
          325          330          335
Arg Gly Thr Pro Asp Arg Ser Gln Ala Asp Pro Asp Phe Ala Ser Glu
          340          345          350
Val Met Ser Val Ser Asp Trp Glu Glu Phe Asp Asn Ser Ser Glu Asp
          355          360          365

```

&lt;210&gt; 5373

&lt;211&gt; 4221

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5373

```

cggtgctggc cccggcgagg tagcttctgg aaggcgctgc tcttcgggtt ctctgtcccg
60
gttcctgggg ttgcacagac agaccctgta aacatgtcag ggttcagtcg ggaactcatc
120
gactacttgg aagggaaaat ctcccttgag gagttcgaac ggcggagaga agagagaaaa
180
acccgcgaga agaaaagtct tcaggaaaaa ggcaagttat cagctgaaga aaatcccgat
240
gactctgaag ttccatcatc atcaggaatt aactctacca aatcccaaga caaagatgtc
300
aatgaaggag aaacatcaga tggagtgagg aagtcagttc acaaggtctt tgcttccatg
360
cttggagaga atgaagatga tgaggaggaa gaggaagaag aggaggagga ggaggaggag
420
gaagaaacac ctgagcaacc cactgcgggc gatgtatttg tattggagat ggttctcaat
480
cgtgaaacca agaaaatgat gaaagagaaa aggcctcgga gtaaacttcc cagagctctg
540
agaggtctca tgggtgaagc caacattcgt ttgctcgag gagaacgtga agaggcgata
600
ttgatgtgca tggaaatcat aagacaagct cctctggctt atgagccatt ctctactcta
660
gccatgatat atgaggacca aggtgacatg gaaaaatcat tgcagtttga gttgattgct
720
gcgcatttaa atcccagtga cacagaagaa tgggttagac tggcagaaat gtctctggaa
780
caagacaata ttaagcaggc tattttttgc tatacaaaag ctcttaaata tgaacctact
840
aatgtccggt atctgtggga gcgatcaagc ctttatgaac agatgggtga tcataaaatg
900

```

gccatggatg gttataggcg tattttaaac cttttgtctc catctgatgg cgaacgtttt  
960  
atgcagctgg ctagagatat ggcaaagagt tactatgaag ccaatgatgt tacttctgct  
1020  
attaacataa ttgatgaagc tttctcaaaa caccagggcc tagtctccat ggaagatgtt  
1080  
aacatagcag ctgaactata tatttctaac aaacagtatg acaaagcttt ggagataatt  
1140  
acagattttt ctggaattgt gctggaaaaa aaaacttcag aagaaggcac ctcagaagag  
1200  
aataaagctc ctgagaatgt tacctgcact atacctgatg gcgtgccaat agatatcaca  
1260  
gtgaagttga tgggtctgcct tgtacatctc aacattcttg aaccacttaa tcctctcttg  
1320  
acaacactag tagaacagaa tcctgaagat atgggagacc tatacctaga tgttgctgaa  
1380  
gcttttctgg atgttggtga atataattct gcacttcccc tcctcagtgc tcttgtttgc  
1440  
tctgaaagat acaaccttgc agtagtttgg cttcgtcatg cagaatgttt aaaggcetta  
1500  
ggctatatgg agcgagctgc tgaaagctat ggcaaggtag ttgatctggc cccactccat  
1560  
ttggatgcaa ggatttcact ttctaccctt cagcagcagc tgggccagcc tgagaaagct  
1620  
ctggaagctc tggaaccaat gtatgatcca gatactttag cacaggatgc aaatgctgca  
1680  
cagcaggaac tgaagttatt gcttcacgt tctactctgt tgttttcaca aggcaaatg  
1740  
tatggttatg tggatacctt acttactatg ttagccatgc ttttaaagggt agcaatgaat  
1800  
cgagcccaag tttgtttgat atccagttcc aagtctggag agaggcatct ttatcttatt  
1860  
aaagtatcga gagacaaaat atcagacagc aatgaccaag agtcagcaaa ttgtgatgca  
1920  
aaagcaatat ttgctgtgct cacaagcgtc ttgacaaagg atgactggtg gaatcttctg  
1980  
ttgaaggcca tatactcctt atgtgaccta tcccgatttc aagaggctga gttgcttgta  
2040  
gattcctcat tggaatatta ctcatcttat gatgacaggc aaaaacgcaa agaactagaa  
2100  
tactttggtc tgtctgctgc aattctggac aaaaatttca gaaaggcata caactatate  
2160  
aggataatgg taatggaaaa tgtcaataaa cccagctctt ggaacatttt caatcaagtt  
2220  
accatgcact cccaagatgt acgacatcat cgcttctgtc tccgtttgat gctgaaaaac  
2280  
ccagaaaate atgccctatg tgtcttaaata ggacacaatg catttgatc ttgtagtttt  
2340  
aagcatgcgc ttggacagta tgtgcaagcc tttegcactc accctgacga acctctctat  
2400  
agcttctgta taggcctaac ctttattcat atggcatctc agaagtatgt gttacggaga  
2460  
catgctctta ttgtacaggg cttttccttt cttaatcgat acctcagttt acgtgggccc  
2520

tgccaggaat cattctacaa tttgggccgt ggccttcac agttggggct gattcatctt  
2580  
gcaatccact attatcagaa ggccctggag ctccctccac ttgtggtaga gggatatagaa  
2640  
cttgaccagt tagacttacg aagagatatt gcctacaact tgtctctcat ctatcagagc  
2700  
agtgggaata ccggaatggc tcaaacgctt ttgtatacct attgttctat ataaagcacc  
2760  
gcaactgaga acagagcaat ggcagctgct gtgtgaggac cagtgtcttc tgtctcaggg  
2820  
cttattatctt gtaactccaa aatagaaatg acaatttcag aattaccta caaacagtgt  
2880  
atttattttt aatatgtgat aatgatcttg tggatatatat gcaaaattat tcctacaaaa  
2940  
atttgtatat tggctctgtca ttttcctttc acattctata gtgaattgtt cccaatgttg  
3000  
aaatggacgt gtaagccttt gagctagctt ggagtcgaat acactatttt tcactcacac  
3060  
catttattca tctttgtatt taatactata gctctgtcaa tatcacatga ggcagttttt  
3120  
caaatacgt taaacagagg ttgcttatta ttaaaggaaa gacaaagtgg gactctttat  
3180  
gatgtcatga ccatgataac taagcaccta agaaaattat taaaatagt tatgtggtag  
3240  
gcagaaagac aaataattta gttttttact tttcaccagc atgtatctta gctacctaaa  
3300  
ctgaaacatg ggaggctggg cttaattcaa aatatattgc tccaaggcaa ataaaaaat  
3360  
gctttatcta tatttgtggc tttctgatga aaaaatagag aagagcttgt tcaataacag  
3420  
gacatgggtt ccatttcaag atcacaagta atataagact gggcaagtag tacgtatgga  
3480  
ataaaggaca tactgctgat tgataaagta aaaaactttt tttttttgtt tgtttactca  
3540  
tctccactat ttattatatg ttcttgaatt taagttaaca gtacttttta gatgatatac  
3600  
tgtagctta ataacaactt tttagggaaa aataaatgct gtaattaatg tgcacatggg  
3660  
ttagtaacac ccagcccaat tgtggggagg aaacaagtag aggcttagga tcaaagaaat  
3720  
aaaattggga cttattagaa attcttacca ctgtttctac tgtacacaaa actttctagt  
3780  
tgagcagaat ttgtatgcaa taagtaaata tattgtatac tccatgtgta taatttaaat  
3840  
gcattttatt tttataattg aggttaactg tttcacatgc ttaattttta ctttatgcca  
3900  
tttataggta atggtagagg taactgagat acagtaataa gttagacttg tgtgttgga  
3960  
ttctgtggaa ctgagcattc tgtgctccga gtttctctct taaattagct cactggactg  
4020  
tggctccagt gtctactaaa tagccgtgga ggaaataagt ctccctgttt tatgcactga  
4080  
gactctgctg ctctgcatg atcacagttg atcgaggagg gagtctgctc ctgaaccaac  
4140



ctgggccaat caggagtttc ctcccgcctt ccctgggaat ttcagacttg aaatagttca  
4200  
tgtagggcca gaacttcaga a  
4221

<210> 5374

<211> 886

<212> PRT

<213> Homo sapiens

<400> 5374

Met	Ser	Gly	Phe	Ser	Pro	Glu	Leu	Ile	Asp	Tyr	Leu	Glu	Gly	Lys	Ile
1				5					10					15	
Ser	Phe	Glu	Glu	Phe	Glu	Arg	Arg	Arg	Glu	Glu	Arg	Lys	Thr	Arg	Glu
		20					25						30		
Lys	Lys	Ser	Leu	Gln	Glu	Lys	Gly	Lys	Leu	Ser	Ala	Glu	Glu	Asn	Pro
		35					40					45			
Asp	Asp	Ser	Glu	Val	Pro	Ser	Ser	Ser	Gly	Ile	Asn	Ser	Thr	Lys	Ser
	50					55					60				
Gln	Asp	Lys	Asp	Val	Asn	Glu	Gly	Glu	Thr	Ser	Asp	Gly	Val	Arg	Lys
65					70					75				80	
Ser	Val	His	Lys	Val	Phe	Ala	Ser	Met	Leu	Gly	Glu	Asn	Glu	Asp	Asp
			85					90					95		
Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Glu	Thr
			100				105						110		
Pro	Glu	Gln	Pro	Thr	Ala	Gly	Asp	Val	Phe	Val	Leu	Glu	Met	Val	Leu
		115					120						125		
Asn	Arg	Glu	Thr	Lys	Lys	Met	Met	Lys	Glu	Lys	Arg	Pro	Arg	Ser	Lys
	130					135					140				
Leu	Pro	Arg	Ala	Leu	Arg	Gly	Leu	Met	Gly	Glu	Ala	Asn	Ile	Arg	Phe
145					150					155				160	
Ala	Arg	Gly	Glu	Arg	Glu	Glu	Ala	Ile	Leu	Met	Cys	Met	Glu	Ile	Ile
			165					170					175		
Arg	Gln	Ala	Pro	Leu	Ala	Tyr	Glu	Pro	Phe	Ser	Thr	Leu	Ala	Met	Ile
		180						185					190		
Tyr	Glu	Asp	Gln	Gly	Asp	Met	Glu	Lys	Ser	Leu	Gln	Phe	Glu	Leu	Ile
	195					200						205			
Ala	Ala	His	Leu	Asn	Pro	Ser	Asp	Thr	Glu	Glu	Trp	Val	Arg	Leu	Ala
	210					215					220				
Glu	Met	Ser	Leu	Glu	Gln	Asp	Asn	Ile	Lys	Gln	Ala	Ile	Phe	Cys	Tyr
225					230					235				240	
Thr	Lys	Ala	Leu	Lys	Tyr	Glu	Pro	Thr	Asn	Val	Arg	Tyr	Leu	Trp	Glu
			245					250					255		
Arg	Ser	Ser	Leu	Tyr	Glu	Gln	Met	Gly	Asp	His	Lys	Met	Ala	Met	Asp
		260						265					270		
Gly	Tyr	Arg	Arg	Ile	Leu	Asn	Leu	Leu	Ser	Pro	Ser	Asp	Gly	Glu	Arg
	275					280						285			
Phe	Met	Gln	Leu	Ala	Arg	Asp	Met	Ala	Lys	Ser	Tyr	Tyr	Glu	Ala	Asn
	290					295					300				
Asp	Val	Thr	Ser	Ala	Ile	Asn	Ile	Ile	Asp	Glu	Ala	Phe	Ser	Lys	His
305					310					315				320	
Gln	Gly	Leu	Val	Ser	Met	Glu	Asp	Val	Asn	Ile	Ala	Ala	Glu	Leu	Tyr
			325					330					335		
Ile	Ser	Asn	Lys	Gln	Tyr	Asp	Lys	Ala	Leu	Glu	Ile	Ile	Thr	Asp	Phe

			340					345				350			
Ser	Gly	Ile	Val	Leu	Glu	Lys	Lys	Thr	Ser	Glu	Glu	Gly	Thr	Ser	Glu
		355					360					365			
Glu	Asn	Lys	Ala	Pro	Glu	Asn	Val	Thr	Cys	Thr	Ile	Pro	Asp	Gly	Val
	370					375					380				
Pro	Ile	Asp	Ile	Thr	Val	Lys	Leu	Met	Val	Cys	Leu	Val	His	Leu	Asn
385					390					395					400
Ile	Leu	Glu	Pro	Leu	Asn	Pro	Leu	Leu	Thr	Thr	Leu	Val	Glu	Gln	Asn
				405					410					415	
Pro	Glu	Asp	Met	Gly	Asp	Leu	Tyr	Leu	Asp	Val	Ala	Glu	Ala	Phe	Leu
			420					425					430		
Asp	Val	Gly	Glu	Tyr	Asn	Ser	Ala	Leu	Pro	Leu	Leu	Ser	Ala	Leu	Val
		435					440					445			
Cys	Ser	Glu	Arg	Tyr	Asn	Leu	Ala	Val	Val	Trp	Leu	Arg	His	Ala	Glu
	450					455					460				
Cys	Leu	Lys	Ala	Leu	Gly	Tyr	Met	Glu	Arg	Ala	Ala	Glu	Ser	Tyr	Gly
465					470					475					480
Lys	Val	Val	Asp	Leu	Ala	Pro	Leu	His	Leu	Asp	Ala	Arg	Ile	Ser	Leu
			485						490					495	
Ser	Thr	Leu	Gln	Gln	Leu	Gly	Gln	Pro	Glu	Lys	Ala	Leu	Glu	Ala	
		500					505					510			
Leu	Glu	Pro	Met	Tyr	Asp	Pro	Asp	Thr	Leu	Ala	Gln	Asp	Ala	Asn	Ala
		515					520					525			
Ala	Gln	Gln	Glu	Leu	Lys	Leu	Leu	Leu	His	Arg	Ser	Thr	Leu	Leu	Phe
	530					535					540				
Ser	Gln	Gly	Lys	Met	Tyr	Gly	Tyr	Val	Asp	Thr	Leu	Leu	Thr	Met	Leu
545					550					555					560
Ala	Met	Leu	Leu	Lys	Val	Ala	Met	Asn	Arg	Ala	Gln	Val	Cys	Leu	Ile
				565					570					575	
Ser	Ser	Ser	Lys	Ser	Gly	Glu	Arg	His	Leu	Tyr	Leu	Ile	Lys	Val	Ser
			580					585					590		
Arg	Asp	Lys	Ile	Ser	Asp	Ser	Asn	Asp	Gln	Glu	Ser	Ala	Asn	Cys	Asp
		595					600					605			
Ala	Lys	Ala	Ile	Phe	Ala	Val	Leu	Thr	Ser	Val	Leu	Thr	Lys	Asp	Asp
	610					615					620				
Trp	Trp	Asn	Leu	Leu	Leu	Lys	Ala	Ile	Tyr	Ser	Leu	Cys	Asp	Leu	Ser
625					630					635					640
Arg	Phe	Gln	Glu	Ala	Glu	Leu	Leu	Val	Asp	Ser	Ser	Leu	Glu	Tyr	Tyr
				645					650					655	
Ser	Phe	Tyr	Asp	Asp	Arg	Gln	Lys	Arg	Lys	Glu	Leu	Glu	Tyr	Phe	Gly
		660					665						670		
Leu	Ser	Ala	Ala	Ile	Leu	Asp	Lys	Asn	Phe	Arg	Lys	Ala	Tyr	Asn	Tyr
	675					680						685			
Ile	Arg	Ile	Met	Val	Met	Glu	Asn	Val	Asn	Lys	Pro	Gln	Leu	Trp</	

770	775	780
Tyr Val Leu Arg Arg His Ala Leu Ile Val Gln Gly Phe Ser Phe Leu		
785	790	795
Asn Arg Tyr Leu Ser Leu Arg Gly Pro Cys Gln Glu Ser Phe Tyr Asn		800
	805	810
Leu Gly Arg Gly Leu His Gln Leu Gly Leu Ile His Leu Ala Ile His		815
	820	825
Tyr Tyr Gln Lys Ala Leu Glu Leu Pro Pro Leu Val Val Glu Gly Ile		830
	835	840
Glu Leu Asp Gln Leu Asp Leu Arg Arg Asp Ile Ala Tyr Asn Leu Ser		845
	850	855
Leu Ile Tyr Gln Ser Ser Gly Asn Thr Gly Met Ala Gln Thr Leu Leu		860
865	870	875
Tyr Thr Tyr Cys Ser Ile		880
	885	

<210> 5375  
 <211> 526  
 <212> DNA  
 <213> Homo sapiens

<400> 5375  
 ctctaggaac ccctccaagt ggctcgggtgt cgccctcagc ttttctaaag ggatggatga  
 60  
 tagggtcagg ggtagaggat ttgtgatcct tcaagtttgc agggcttccc gtgttctaag  
 120  
 tggtaacgat ctgtcttctg caaatgggtt acagcgtgct gctgccagtt ctgaatcccc  
 180  
 agtagcccg gacttgggtgc agttgaaatc catttccctt tttgccttta gtgagggcatc  
 240  
 cccctcctcc ttattaaaga agaatacatg tcgctgcat ttgccacgta tttgccatag  
 300  
 acccaggact attagcatct ttaaccacg taaccacact ggggatggct ggggaatgtt  
 360  
 catgtcccca ttttacagga gtggtgatta aggctcaaag gatggagggtg atggatcaaa  
 420  
 gtcgtctgcc aagtgggtggc agcattgggt ctcagaccga ggcccgctca cacagtgtctg  
 480  
 tgctcctcc caccacgaat gcacgtggcc cactctgccc acgcgt  
 526

<210> 5376  
 <211> 112  
 <212> PRT  
 <213> Homo sapiens

<400> 5376  
 Met Asp Asp Arg Val Arg Gly Arg Gly Phe Val Ile Leu Gln Val Cys  
 1 5 10 15  
 Arg Ala Ser Arg Val Leu Ser Gly Asn Asp Leu Ser Ser Ala Asn Gly  
 20 25 30  
 Leu Gln Arg Ala Ala Ala Ser Ser Glu Ser Pro Val Ala Arg Thr Trp  
 35 40 45  
 Val Gln Leu Lys Ser Ile Ser Leu Phe Ala Phe Ser Glu Ala Ser Pro

50	55	60
Ser Ser Leu Leu Lys Lys Asn Thr Cys Arg Cys His Leu Pro Arg Ile		
65	70	75
Cys His Arg Pro Arg Thr Ile Ser Ile Phe Asn Pro Arg Asn His Thr		80
	85	90
Gly Asp Gly Trp Gly Met Phe Met Ser Pro Phe Tyr Arg Ser Gly Asp		95
100	105	110

&lt;210&gt; 5377

&lt;211&gt; 1452

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5377

```

nctcgagctg ggtcccgatt cagacatgaa atatccttta catggtgtcc atccatgtat
60
cttgtggcgg cctcggcagc ggtgttctcg cgcttgcgaa gcgggctccg gctcggctcg
120
cggggactgt gcacgaggtt ggcgacgccg ccccgccggg cccagatca ggccgcagag
180
atcgggagcc gcgggagcac taaggcgcaa gggccacagc agcagccggg ctcagagggt
240
cccagctatg ccaaaaaagt tgcgtctctg cttgctgggc tgcttgagc tgggtgggact
300
gtgagcgtcg tctatatctt tggaaacaac ccggtggacg aaaatggtgc caagattcct
360
gatgagttcg acaatgatcc aattctggta cagcagttgc gccggacata caaatatttc
420
aaagattata gacagatgat catcgagccc accagccctt gccttctccc agaccctctg
480
caggaaccgt actaccagcc accctacacg ctcgtttttg agctcacggg cgctcctctg
540
catcctgagt ggtcgctggc cactggctgg aggtttaaga agcgcccagg catcgagacc
600
ttgttccagc agcttgcccc ttatatgaa attgtcatct ttacgtcaga gactggcatg
660
actgcgttcc cactcattga tagtgtggac ccccatggct tcctctccta ccgcctattc
720
cgggacgcca caagatacat ggatggacac catgtaaagg atatttcatg tctgaatcgg
780
gaccagctc gagtagtagt tgtggactgc aagaaggaag ccttcgcct gcagccctat
840
aacggcggtg ccctgcggcc ctgggacggc aactctgatg accgggtctt gttggatctg
900
tctgccttcc tcaagaccat tgcactgaat ggtgtggagg acgtgcgaac cgtgctggag
960
cactatgccc tggaggatga cccgctggcg gctttcaaac agcggcaaag ccggctagag
1020
caggaggagc agcagcgctt ggccgagctc tccaagtcca acaagcagaa cctcttcctt
1080
ggctccctca ccagccgctt gtggcctcgc tccaaacagc cctgaactct gggcctcctc
1140
aaactcagtg cctgggtcca gggccccagt gcttcagac caagacttgg gccaccactt
1200

```

gtccaataaa gtacatccca gacgccacac ctgctgtgtc ccgagagtct ccagatgggg  
 1260  
 gcatcagggg gaggtccggg actcttgggt catcgtccca cagtggctga tcggctgcca  
 1320  
 agcacagtgg ggggtgctttg ttggatcaga gcagattttt caccctgggc tcggaatcta  
 1380  
 aaaaccctcg ctgtgtcttc ctgtgtgttg cgtgatctgt gaaaaatata tctccctctg  
 1440  
 accaaaaaaa aa  
 1452

<210> 5378

<211> 374

<212> PRT

<213> Homo sapiens

<400> 5378

Xaa	Arg	Ala	Gly	Ser	Arg	Phe	Arg	His	Glu	Ile	Ser	Phe	Thr	Trp	Cys
1			5						10					15	
Pro	Ser	Met	Tyr	Leu	Val	Ala	Ala	Ser	Ala	Ala	Val	Phe	Ser	Arg	Leu
			20					25					30		
Arg	Ser	Gly	Leu	Arg	Leu	Gly	Ser	Arg	Gly	Leu	Cys	Thr	Arg	Leu	Ala
		35				40					45				
Thr	Pro	Pro	Arg	Arg	Ala	Pro	Asp	Gln	Ala	Ala	Glu	Ile	Gly	Ser	Arg
	50					55					60				
Gly	Ser	Thr	Lys	Ala	Gln	Gly	Pro	Gln	Gln	Gln	Pro	Gly	Ser	Glu	Gly
65					70				75					80	
Pro	Ser	Tyr	Ala	Lys	Lys	Val	Ala	Leu	Trp	Leu	Ala	Gly	Leu	Leu	Gly
			85					90					95		
Ala	Gly	Gly	Thr	Val	Ser	Val	Val	Tyr	Ile	Phe	Gly	Asn	Asn	Pro	Val
			100					105					110		
Asp	Glu	Asn	Gly	Ala	Lys	Ile	Pro	Asp	Glu	Phe	Asp	Asn	Asp	Pro	Ile
	115						120					125			
Leu	Val	Gln	Gln	Leu	Arg	Arg	Thr	Tyr	Lys	Tyr	Phe	Lys	Asp	Tyr	Arg
	130					135					140				
Gln	Met	Ile	Ile	Glu	Pro	Thr	Ser	Pro	Cys	Leu	Leu	Pro	Asp	Pro	Leu
145					150				155					160	
Gln	Glu	Pro	Tyr	Tyr	Gln	Pro	Pro	Tyr	Thr	Leu	Val	Leu	Glu	Leu	Thr
			165					170					175		
Gly	Val	Leu	Leu	His	Pro	Glu	Trp	Ser	Leu	Ala	Thr	Gly	Trp	Arg	Phe
	180						185					190			
Lys	Lys	Arg	Pro	Gly	Ile	Glu	Thr	Leu	Phe	Gln	Gln	Leu	Ala	Pro	Leu
	195						200					205			
Tyr	Glu	Ile	Val	Ile	Phe	Thr	Ser	Glu	Thr	Gly	Met	Thr	Ala	Phe	Pro
	210					215					220				
Leu	Ile	Asp	Ser	Val	Asp	Pro	His	Gly	Phe	Ile	Ser	Tyr	Arg	Leu	Phe
225					230				235					240	
Arg	Asp	Ala	Thr	Arg	Tyr	Met	Asp	Gly	His	His	Val	Lys	Asp	Ile	Ser
			245					250						255	
Cys	Leu	Asn	Arg	Asp	Pro	Ala	Arg	Val	Val	Val	Val	Asp	Cys	Lys	Lys
		260					265					270			
Glu	Ala	Phe	Arg	Leu	Gln	Pro	Tyr	Asn	Gly	Val	Ala	Leu	Arg	Pro	Trp
	275					280					285				
Asp	Gly	Asn	Ser	Asp	Asp	Arg	Val	Leu	Leu	Asp	Leu	Ser	Ala	Phe	Leu

290 295 300  
Lys Thr Ile Ala Leu Asn Gly Val Glu Asp Val Arg Thr Val Leu Glu  
305 310 315 320  
His Tyr Ala Leu Glu Asp Asp Pro Leu Ala Ala Phe Lys Gln Arg Gln  
325 330 335  
Ser Arg Leu Glu Gln Glu Glu Gln Gln Arg Leu Ala Glu Leu Ser Lys  
340 345 350  
Ser Asn Lys Gln Asn Leu Phe Leu Gly Ser Leu Thr Ser Arg Leu Trp  
355 360 365  
Pro Arg Ser Lys Gln Pro  
370

&lt;210&gt; 5379

&lt;211&gt; 3213

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5379

naggcgtcac tcaatatccc tgcagtggcg gccgcccattg tgatcaaacg gtatacagcc  
60  
caggcgccag atgagctgtc ctttgaggtg aggctgtggg gaagcagatt ccagctgggc  
120  
tccccacacc cctgtctcct tctgaccctt ctcttcccac ccgccctctc ccaggtggga  
180  
gacattgtct cggatgatga catgccaccc acagaggatc ggagctggtg gcggggcaag  
240  
cgaggcttcc agctgtgcca cggcctcgtg ggaagctggc cggcctgctc cgcaccttca  
300  
tgcgctcccg cccttctcgg cagcggctgc ggcagcgggg aatcctgcga cagaggggtg  
360  
ttggctgcga tcttggcgag cacctcagca actcaggcca ggatggtgct gcgctgctgc  
420  
tccgagttca ttgaggccca cgggggtggtg gatgggatct accggctctc aggcgtgtct  
480  
tccaacatcc agaggcttcg gcacgagttt gacagtgaga ggatcccga gctgtctggc  
540  
cctgcattcc tgcaggacat ccacagcgtg tcttccctct gcaagctcta cttccgagag  
600  
cttccgaacc ctctgctcac ctaccagctc tatgggaagt tcagtgaggc catgtcagt  
660  
cctggggagg aggagcgtct ggtgcgggtg cactgatgtca tccagcagct gccccacca  
720  
cattacagga ccctggagta cctgctgagg cacctggccc gcatggcgag acacagtgcc  
780  
aacaccagca tgcattgccc caacctggcc attgtctggg caccacacct gctacggtec  
840  
atggagctgg agtcagtggg aatgggtggc gcggcggtgt tccgggaagt tcgggtgcag  
900  
tcgggtggtg tggagtttct gctcaccat gtggacgtcc tgttcagcga caccttcacc  
960  
tccgccggcc tcgacctgc aggcgctgc ctgctcccca ggcccaagtc ccttgcgggc  
1020  
agctgccct ccaccgcct gctgacgtg gaggaagccc aggcacgcac ccagggccgg  
1080

ctggggacgc ccacggagcc cacaactccc aaggccccgg cctcacctgc ggaaaggagg  
1140  
aaaggggaga gaggggagaa gcagcggaag ccagggggca gcagctggaa gacgttcttt  
1200  
gcactgggccc ggggccccag tgtccctcga aagaagcccc tgccctggct ggggggcacc  
1260  
cgtgccccac cgcagccttc agcctggcta gatgatggtg atgagctgga cttcagccca  
1320  
ccccgtgcc tggagggact ccgggggctg gactttgatc ccttaacctt ccgctgcage  
1380  
agccccaccc caggggatcc cgcacctccc gccagcccag cccccccgc ccctgcctct  
1440  
gccttccac ccagggtgac ccccaggcc atctcgcccc gggggccac cagccccgcc  
1500  
tcgctgctg ccctagacat ctcagagccc ctggctgtat cagtgccacc cgctgtcta  
1560  
gaactgctgg gggctggggg agcacctgcc tcagccaccc caacaccage tctcagcccc  
1620  
ggccggagcc tgcgccccca tctcataccc ctgctgctgc gaggagccga ggccccgctg  
1680  
actgacgcct gccagcagga gatgtgcagc aagctccggg gagcccaggg cccactcgca  
1740  
cgctcatgg ccctggccct ggctgagcgg gctcagcagg tggccgagca acagagccag  
1800  
caggagtgtg ggggcacccc acctgcttcc caatccccct tccaccgctc gctgtctctg  
1860  
gagggtggcg gggagccccct ggggacctca gggagtgggc cacctccaa ctccctagca  
1920  
cacccgggtg cctgggtccc gggacccccca ccctacttac caaggcaaca aagtgatggg  
1980  
agcctgctga ggagccagcg gcccattggg acctcaagga ggggactccg aggcctgcc  
2040  
caggtcagt cccagctcag ggcagggtgc gggggcaggg atgcgccaga ggcagcagcc  
2100  
cagtcccat gttctgtccc ctcacagggt cctacccccg gcttcttctc cccagcccc  
2160  
agggagtgcc tgccaccctt cctcggggtc cccaagccag gcttgtacct cctgggcccc  
2220  
ccatccttc agcccagttc cccagcccca gtctggagga gctctctggg cccccctgca  
2280  
ccactcgaca ggggagagaa cctgtactat gagatcgggg caagtgagg gtccccctat  
2340  
tctggccccca cccgtcctg gagtccctt cgctccatgc ccccgacag gctcaatgcc  
2400  
tcctacggca tgcttgcca atcaccccc ctccacaggt ccccgactt cctgctcage  
2460  
taccgcccag cccctcctg ctttccccct gaccacctg gctactcage ccccagcac  
2520  
cctgctcggc gccctacacc gcctgagccc ctctacgtca acctagctct agggcccagg  
2580  
ggtccctcac ctgctcttc ctctcctct tccccctg cccacccccg aagccgttca  
2640  
gatcccggtc cccagtcct ccgccttccc cagaaacaac gggcaccctg gggacccgt  
2700

acccctcata ggggtgccggg tccctggggc cctcctgagc ctctcctgct ctacagggca  
 2760  
 gccccgccag cctacggaag ggggggagag ctccaccgag ggtccttgta cagaaatgga  
 2820  
 gggcaaagag gggagggggc tggccccca ccccttacc ccactcccag ctggtccttc  
 2880  
 cactctgagg gccagaccg aagctactgc tgagcaccag ctgggagggg ccgtccttcc  
 2940  
 ttcccttcac cctcactgga tcttgcccc accaaatccc ttgttttgta tttcttgaa  
 3000  
 ccccgaccac taccaggt ttctaacttt gtaacttgct tctgatgtgg gtccctaacc  
 3060  
 tataatctca gcttcctac cctggactga agggctctgcc catccccca ccacctcca  
 3120  
 tcctgggggc cctcgacaaa atctggggtg ggaggggcta ggctgacccc atcctcctct  
 3180  
 ccctccagga gccccagca tgtcctgacc tgt  
 3213

&lt;210&gt; 5380

&lt;211&gt; 903

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5380

Met	Pro	Pro	Thr	Glu	Asp	Arg	Ser	Trp	Trp	Arg	Gly	Lys	Arg	Gly	Phe
1				5				10					15		
Gln	Leu	Cys	His	Gly	Leu	Val	Gly	Ser	Trp	Pro	Ala	Cys	Ser	Ala	Pro
			20					25					30		
Ser	Cys	Ala	Pro	Ala	Leu	Leu	Gly	Ser	Gly	Cys	Gly	Ser	Gly	Glu	Ser
		35					40					45			
Cys	Asp	Arg	Gly	Cys	Leu	Ala	Ala	Ile	Leu	Ala	Ser	Thr	Ser	Ala	Thr
	50					55				60					
Gln	Ala	Arg	Met	Val	Leu	Arg	Cys	Cys	Ser	Glu	Phe	Ile	Glu	Ala	His
65				70						75				80	
Gly	Val	Val	Asp	Gly	Ile	Tyr	Arg	Leu	Ser	Gly	Val	Ser	Ser	Asn	Ile
			85					90						95	
Gln	Arg	Leu	Arg	His	Glu	Phe	Asp	Ser	Glu	Arg	Ile	Pro	Glu	Leu	Ser
			100					105					110		
Gly	Pro	Ala	Phe	Leu	Gln	Asp	Ile	His	Ser	Val	Ser	Ser	Leu	Cys	Lys
		115					120					125			
Leu	Tyr	Phe	Arg	Glu	Leu	Pro	Asn	Pro	Leu	Leu	Thr	Tyr	Gln	Leu	Tyr
	130					135					140				
Gly	Lys	Phe	Ser	Glu	Ala	Met	Ser	Val	Pro	Gly	Glu	Glu	Glu	Arg	Leu
145				150						155				160	
Val	Arg	Val	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg
			165					170					175		
Thr	Leu	Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser
			180					185					190		
Ala	Asn	Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro
		195					200						205		
Asn	Leu	Leu	Arg	Ser	Met	Glu	Leu	Glu	Ser	Val	Gly	Met	Gly	Gly	Ala
	210					215					220				
Ala	Ala	Phe	Arg	Glu	Val	Arg	Val	Gln	Ser	Val	Val	Val	Glu	Phe	Leu



225		230		235		240
Leu Thr His Val Asp Val Leu Phe Ser Asp Thr Phe Thr Ser Ala Gly						
	245		250		255	
Leu Asp Pro Ala Gly Arg Cys Leu Leu Pro Arg Pro Lys Ser Leu Ala						
	260		265		270	
Gly Ser Cys Pro Ser Thr Arg Leu Leu Thr Leu Glu Glu Ala Gln Ala						
	275		280		285	
Arg Thr Gln Gly Arg Leu Gly Thr Pro Thr Glu Pro Thr Thr Pro Lys						
	290		295		300	
Ala Pro Ala Ser Pro Ala Glu Arg Arg Lys Gly Glu Arg Gly Glu Lys						
305		310		315		320
Gln Arg Lys Pro Gly Gly Ser Ser Trp Lys Thr Phe Phe Ala Leu Gly						
	325		330		335	
Arg Gly Pro Ser Val Pro Arg Lys Lys Pro Leu Pro Trp Leu Gly Gly						
	340		345		350	
Thr Arg Ala Pro Pro Gln Pro Ser Ala Trp Leu Asp Asp Gly Asp Glu						
	355		360		365	
Leu Asp Phe Ser Pro Pro Arg Cys Leu Glu Gly Leu Arg Gly Leu Asp						
	370		375		380	
Phe Asp Pro Leu Thr Phe Arg Cys Ser Ser Pro Thr Pro Gly Asp Pro						
385		390		395		400
Ala Pro Pro Ala Ser Pro Ala Pro Pro Ala Pro Ala Ser Ala Phe Pro						
	405		410		415	
Pro Arg Val Thr Pro Gln Ala Ile Ser Pro Arg Gly Pro Thr Ser Pro						
	420		425		430	
Ala Ser Pro Ala Ala Leu Asp Ile Ser Glu Pro Leu Ala Val Ser Val						
	435		440		445	
Pro Pro Ala Val Leu Glu Leu Leu Gly Ala Gly Gly Ala Pro Ala Ser						
	450		455		460	
Ala Thr Pro Thr Pro Ala Leu Ser Pro Gly Arg Ser Leu Arg Pro His						
465		470		475		480
Leu Ile Pro Leu Leu Leu Arg Gly Ala Glu Ala Pro Leu Thr Asp Ala						
	485		490		495	
Cys Gln Gln Glu Met Cys Ser Lys Leu Arg Gly Ala Gln Gly Pro Leu						
	500		505		510	
Ala Arg Leu Met Ala Leu Ala Leu Ala Glu Arg Ala Gln Gln Val Ala						
	515		520		525	
Glu Gln Gln Ser Gln Gln Glu Cys Gly Gly Thr Pro Pro Ala Ser Gln						
	530		535		540	
Ser Pro Phe His Arg Ser Leu Ser Leu Glu Val Gly Gly Glu Pro Leu						
545		550		555		560
Gly Thr Ser Gly Ser Gly Pro Pro Pro Asn Ser Leu Ala His Pro Gly						
	565		570		575	
Ala Trp Val Pro Gly Pro Pro Pro Tyr Leu Pro Arg Gln Gln Ser Asp						
	580		585		590	
Gly Ser Leu Leu Arg Ser Gln Arg Pro Met Gly Thr Ser Arg Arg Gly						
	595		600		605	
Leu Arg Gly Pro Ala Gln Val Ser Ala Gln Leu Arg Ala Gly Gly Gly						
	610		615		620	
Gly Arg Asp Ala Pro Glu Ala Ala Ala Gln Ser Pro Cys Ser Val Pro						
625		630		635		640
Ser Gln Val Pro Thr Pro Gly Phe Phe Ser Pro Ala Pro Arg Glu Cys						
	645		650		655	
Leu Pro Pro Phe Leu Gly Val Pro Lys Pro Gly Leu Tyr Pro Leu Gly						

660 665 670  
 Pro Pro Ser Phe Gln Pro Ser Ser Pro Ala Pro Val Trp Arg Ser Ser  
 675 680 685  
 Leu Gly Pro Pro Ala Pro Leu Asp Arg Gly Glu Asn Leu Tyr Tyr Glu  
 690 695 700  
 Ile Gly Ala Ser Glu Gly Ser Pro Tyr Ser Gly Pro Thr Arg Ser Trp  
 705 710 715 720  
 Ser Pro Phe Arg Ser Met Pro Pro Asp Arg Leu Asn Ala Ser Tyr Gly  
 725 730 735  
 Met Leu Gly Gln Ser Pro Pro Leu His Arg Ser Pro Asp Phe Leu Leu  
 740 745 750  
 Ser Tyr Pro Pro Ala Pro Ser Cys Phe Pro Pro Asp His Leu Gly Tyr  
 755 760 765  
 Ser Ala Pro Gln His Pro Ala Arg Arg Pro Thr Pro Pro Glu Pro Leu  
 770 775 780  
 Tyr Val Asn Leu Ala Leu Gly Pro Arg Gly Pro Ser Pro Ala Ser Ser  
 785 790 795 800  
 Ser Ser Ser Ser Pro Pro Ala His Pro Arg Ser Arg Ser Asp Pro Gly  
 805 810 815  
 Pro Pro Val Pro Arg Leu Pro Gln Lys Gln Arg Ala Pro Trp Gly Pro  
 820 825 830  
 Arg Thr Pro His Arg Val Pro Gly Pro Trp Gly Pro Pro Glu Pro Leu  
 835 840 845  
 Leu Leu Tyr Arg Ala Ala Pro Pro Ala Tyr Gly Arg Gly Gly Glu Leu  
 850 855 860  
 His Arg Gly Ser Leu Tyr Arg Asn Gly Gly Gln Arg Gly Glu Gly Ala  
 865 870 875 880  
 Gly Pro Pro Pro Pro Tyr Pro Thr Pro Ser Trp Ser Leu His Ser Glu  
 885 890 895  
 Gly Gln Thr Arg Ser Tyr Cys  
 900

&lt;210&gt; 5381

&lt;211&gt; 1576

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5381

nccatggcga tgaggccctt ctttggcatc gtccccgtcc tcatggatga gaagggcagc  
 60  
 gtcgtggagg gcagcaacgt ctccggggcc ctgtgcatct cccaggcctg gccgggcatg  
 120  
 gccaggacca tctatggcga ccaccagcga tttgtggacg cctacttcaa ggcctaccca  
 180  
 ggctattact tcaactggaga cggggcttac cgaactgagg gcggctatta ccagatcaca  
 240  
 gggcggatgg atgatgtcat caacatcagt ggccaccggc tggggaccgc agagattgag  
 300  
 gacgccatcg ccgaccaccc tgcagtacca gaaagtgctg tcattggcta cccccaacgac  
 360  
 atcaaaggag aagctgcctt tgccttcatt gtggtgaaag atagtgcggg tgactcagat  
 420  
 gtggtggtgc aggagctcaa gtccatggtg gccaccaaga tcgccaata tgctgtgcct  
 480

gatgagatcc tgggtggtgaa acgtcttcca aaaaccaggt ctgggaaggt catgcggcgg  
540  
ctcctgagga agatcatcac tagtgaggcc caggagctgg gagacactac caccttgag  
600  
gaccccagca tcatcgaga gatcctgagt gtctaccaga agtgcaagga caagcaggct  
660  
gctgctaagt gagctggcac cttgtggggc tcttgggatg ggcgggcacc caagccctgg  
720  
cttgtccttc ccagaaggta cccctgaggt tggcgtcttc ctacgtccca gaagcagccc  
780  
ccaccccaca catgaccac accgccctca cgtgaagctg ggctgagagc cctttctccc  
840  
atccattgga ggtcccagga gtgtcaccca tggagaggct atgcgacatg gctagggctg  
900  
gttctgcat ctgagtttg tttcctggaa tgaaaaggca ttgccatctc cattcctctg  
960  
ccctcttgag ccagcacagg aaggtagggc cctgggatag cgcgcctgct cagataaac  
1020  
agagctagtt agctagtagc aaccgtgttt tctccagatc tgtctagata caaaggctcag  
1080  
aaatcttatt tttatacttt tatattgtgg aagaacagca tgcaacactc acatgtagtg  
1140  
tgtggattta cttgaacatg ttctttttta catgtagtta tgaaaatctc cttttttgcc  
1200  
tctactgggtg aggaaacatg aggatcagag gccacatttt taattattgt tagtgatttt  
1260  
ggaagtctga attggagatg tttgtacctc tgtctaaaca gttcccttga ggacttccaa  
1320  
gcctccggca tcttttctct gtgagtggtt ctctgtgct tggttgtgta taatggagct  
1380  
aactcctaag cgggtggggtg aatgtggccg ccttagttct gaagctactc cagttatggt  
1440  
ctgtttcttc aagctgtgat ccagaaagat ttttgtgccc ccagatgct tcttgatagg  
1500  
agaggcaaca tactccaat agttgggttc ttcagggaag ctattagaaa ctcagggtgac  
1560  
ttgttagagc actaac  
1576

&lt;210&gt; 5382

&lt;211&gt; 223

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5382

Xaa	Met	Ala	Met	Arg	Pro	Phe	Phe	Gly	Ile	Val	Pro	Val	Leu	Met	Asp
1				5				10					15		
Glu	Lys	Gly	Ser	Val	Val	Glu	Gly	Ser	Asn	Val	Ser	Gly	Ala	Leu	Cys
			20					25					30		
Ile	Ser	Gln	Ala	Trp	Pro	Gly	Met	Ala	Arg	Thr	Ile	Tyr	Gly	Asp	His
		35					40					45			
Gln	Arg	Phe	Val	Asp	Ala	Tyr	Phe	Lys	Ala	Tyr	Pro	Gly	Tyr	Tyr	Phe
	50					55				60					
Thr	Gly	Asp	Gly	Ala	Tyr	Arg	Thr	Glu	Gly	Gly	Tyr	Tyr	Gln	Ile	Thr

65		70		75		80									
Gly	Arg	Met	Asp	Asp	Val	Ile	Asn	Ile	Ser	Gly	His	Arg	Leu	Gly	Thr
			85						90					95	
Ala	Glu	Ile	Glu	Asp	Ala	Ile	Ala	Asp	His	Pro	Ala	Val	Pro	Glu	Ser
			100					105					110		
Ala	Val	Ile	Gly	Tyr	Pro	His	Asp	Ile	Lys	Gly	Glu	Ala	Ala	Phe	Ala
		115					120					125			
Phe	Ile	Val	Val	Lys	Asp	Ser	Ala	Gly	Asp	Ser	Asp	Val	Val	Val	Gln
	130				135					140					
Glu	Leu	Lys	Ser	Met	Val	Ala	Thr	Lys	Ile	Ala	Lys	Tyr	Ala	Val	Pro
145				150						155					160
Asp	Glu	Ile	Leu	Val	Val	Lys	Arg	Leu	Pro	Lys	Thr	Arg	Ser	Gly	Lys
			165					170						175	
Val	Met	Arg	Arg	Leu	Leu	Arg	Lys	Ile	Ile	Thr	Ser	Glu	Ala	Gln	Glu
		180				185						190			
Leu	Gly	Asp	Thr	Thr	Thr	Leu	Glu	Asp	Pro	Ser	Ile	Ile	Ala	Glu	Ile
	195					200					205				
Leu	Ser	Val	Tyr	Gln	Lys	Cys	Lys	Asp	Lys	Gln	Ala	Ala	Ala	Lys	
	210					215					220				

&lt;210&gt; 5383

&lt;211&gt; 2027

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5383

gttgcttcct gtatctcttc tcaagacggc ttccctctat gtgtctatgt ctatgtgtcc  
 60  
 ccctgtaagg acagcagtca tgctggatca gggcccaccc tcatccacac aaccttgtct  
 120  
 taactcagta catctccagt ggccccatth ccaaagaagg ttgcgttctg gggttctggg  
 180  
 ggctgagact ccagcatatg aatttggggg ggacatgatg ggaccagcg cagtggcctt  
 240  
 ctctccgag cagcgccggg caggccaggg catgaccac acctgtttgt ttcccttcag  
 300  
 atcgtctcga ccagagagaa ggagctggtg cagcccttca gctcgtgtt cccgaagggtg  
 360  
 gactacatcg ccagggccgg cgcctgggccc atgttcctgg accggcccca gcagtggctc  
 420  
 cagctcgtcc tctctcccc ggcctgttc atcccagca cagagaatga ggagcagcgg  
 480  
 ctacgtctg ccagagctgt cccaggaat gtccagccgt atgtggtgta cgaggaggtc  
 540  
 accaactctt ggatcaatgt tcatgacatc ttctatccct tccccaatc agaggagag  
 600  
 gacgagctct gctttctccg cgccaatgaa tgcaagaccg gcttctgcca tttgtacaaa  
 660  
 gtcaccgccg ttttaaaatc ccagggctac gattggagtg agcccttcag ccccggggaa  
 720  
 ggtgagcaga gcctgacgaa tgctatctgg gtcaatgagg agaccaagct ggtgtacttc  
 780  
 cagggcacca aggacacgcc gctggagcac cacctctacg tggtcagcta tgaggcggcc  
 840

ggcgagatcg tacgcctcac cacgcccggc ttctcccata gctgctccat gagccagaac  
900  
ttcgacatgt tcgtcagcca ctacagcagc gtgagcacgc cgccctgcgt gcacgtctac  
960  
aagctgagcg gccccgacga cgaccccctg cacaagcagc cccgcttctg ggctagcatg  
1020  
atggaggcag ccaagatctt ccatttccac acgcgctcgg atgtgcggct ctacggcatg  
1080  
atctacaagc cccacgcctt gcagccaggg aagaagcacc ccaccgtcct ctttgtatat  
1140  
ggaggccccc aggtgcagct ggtgaataac tccttcaaag gcatcaagta cttgcggctc  
1200  
aacacactgg cctccctggg ctacgccgtg gttgtgattg acggcagggg ctccctgtcag  
1260  
cgagggtctt gggtcgaagg ggccctgaaa aaccaaattg gccaggtgga gatcgaggac  
1320  
caggtggagg gcctgcagtt cgtggccgag aagtatggct tcatcgacct gagccgagtt  
1380  
gccatccatg gctggctcta cgggggcttc ctctcgctca tggggctaata ccacaagccc  
1440  
caggtgttca aggtggccat cgcgggtgcc ccggtcaccg tctggatggc ctacgacaca  
1500  
gggtacactg agcgtacat ggacgtccct gagaacaacc agcacggcta tgaggcgggt  
1560  
tcctgggccc tgcacgtgga gaagctgccc aatgagccca accgcttgct tatcctccac  
1620  
ggcttccctg acgaaaacgt gcactttttc cacacaaact tcctcgcttc ccaactgatc  
1680  
cgagcagggg aaccttacca gctccaggtg gccctgcctc ctgtctcccc gcagatctac  
1740  
cccaacgaga gacacagtat tcgctgcccc gagtcgggag agcactatga agtcacgttg  
1800  
ctgcactttc tacaggaata cctctgagcc tgcccaccgg gagccgccac atcacagcac  
1860  
aagtggctgc agcctccgag gggaaccagg cgggaggagc tgagtggccc gcgggcccc  
1920  
gtgaggcact ttgtcccgcc cagcgtggc cagccccgag gagccgctgc cttcaccgcc  
1980  
ccgacgcctt ttatcctttt ttaaagctc ttgggtttta tgtccgc  
2027

&lt;210&gt; 5384

&lt;211&gt; 508

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5384

Ile	Val	Ser	Thr	Gln	Glu	Lys	Glu	Leu	Val	Gln	Pro	Phe	Ser	Ser	Leu
1				5				10						15	
Phe	Pro	Lys	Val	Glu	Tyr	Ile	Ala	Arg	Ala	Gly	Ala	Trp	Ala	Met	Phe
			20					25					30		
Leu	Asp	Arg	Pro	Gln	Gln	Trp	Leu	Gln	Leu	Val	Leu	Leu	Pro	Pro	Ala
			35				40					45			
Leu	Phe	Ile	Pro	Ser	Thr	Glu	Asn	Glu	Glu	Gln	Arg	Leu	Ala	Ser	Ala

50				55				60							
Arg 65	Ala	Val	Pro	Arg	Asn 70	Val	Gln	Pro	Tyr	Val 75	Val	Tyr	Glu	Glu	Val 80
Thr	Asn	Val	Trp	Ile 85	Asn	Val	His	Asp	Ile	Phe	Tyr	Pro	Phe	Pro	Gln 95
Ser	Glu	Gly	Glu	Asp 100	Glu	Leu	Cys	Phe	Leu	Arg	Ala	Asn	Glu	Cys	Lys 110
Thr	Gly	Phe	Cys	His 115	Leu	Tyr	Lys	Val	Thr	Ala	Val	Leu	Lys	Ser	Gln 125
Gly	Tyr	Asp	Trp	Ser 130	Glu	Pro	Phe	Ser	Pro	Gly	Glu	Gly	Glu	Gln	Ser 140
Leu 145	Thr	Asn	Ala	Ile 150	Trp	Val	Asn	Glu	Glu	Thr	Lys	Leu	Val	Tyr	Phe 160
Gln	Gly	Thr	Lys	Asp 165	Thr	Pro	Leu	Glu	His	His	Leu	Tyr	Val	Val	Ser 175
Tyr	Glu	Ala	Ala	Gly 180	Glu	Ile	Val	Arg	Leu	Thr	Thr	Pro	Gly	Phe	Ser 190
His	Ser	Cys	Ser	Met 195	Ser	Gln	Asn	Phe	Asp	Met	Phe	Val	Ser	His	Tyr 205
Ser	Ser	Val	Ser	Thr 210	Pro	Pro	Cys	Val	His	Val	Tyr	Lys	Leu	Ser	Gly 220
Pro 225	Asp	Asp	Asp	Pro 230	Leu	His	Lys	Gln	Pro	Arg	Phe	Trp	Ala	Ser	Met 240
Met	Glu	Ala	Ala	Lys 245	Ile	Phe	His	Phe	His	Thr	Arg	Ser	Asp	Val	Arg 255
Leu	Tyr	Gly	Met	Ile 260	Tyr	Lys	Pro	His	Ala	Leu	Gln	Pro	Gly	Lys	Lys 270
His	Pro	Thr	Val	Leu 275	Phe	Val	Tyr	Gly	Gly	Pro	Gln	Val	Gln	Leu	Val 285
Asn	Asn	Ser	Phe	Lys 290	Gly	Ile	Lys	Tyr	Leu	Arg	Leu	Asn	Thr	Leu	Ala 300
Ser 305	Leu	Gly	Tyr	Ala 310	Val	Val	Val	Ile	Asp	Gly	Arg	Gly	Ser	Cys	Gln 320
Arg	Gly	Leu	Arg	Phe 325	Glu	Gly	Ala	Leu	Lys	Asn	Gln	Met	Gly	Gln	Val 335
Glu	Ile	Glu	Asp	Gln 340	Val	Glu	Gly	Leu	Gln	Phe	Val	Ala	Glu	Lys	Tyr 350
Gly	Phe	Ile	Asp	Leu 355	Ser	Arg	Val	Ala	Ile	His	Gly	Trp	Ser	Tyr	Gly 365
Gly	Phe	Leu	Ser	Leu 370	Met	Gly	Leu	Ile	His	Lys	Pro	Gln	Val	Phe	Lys 380
Val 385	Ala	Ile	Ala	Gly 390	Ala	Pro	Val	Thr	Val	Trp	Met	Ala	Tyr	Asp	Thr 400
Gly	Tyr	Thr	Glu	Arg 405	Tyr	Met	Asp	Val	Pro	Glu	Asn	Asn	Gln	His	Gly 415
Tyr	Glu	Ala	Gly	Ser 420	Val	Ala	Leu	His	Val	Glu	Lys	Leu	Pro	Asn	Glu 430
Pro	Asn	Arg	Leu	Leu 435	Ile	Leu	His	Gly	Phe	Leu	Asp	Glu	Asn	Val	His 445
Phe	Phe	His	Thr	Asn 450	Phe	Leu	Val	Ser	Gln	Leu	Ile	Arg	Ala	Gly	Lys 460
Pro 465	Tyr	Gln	Leu	Gln 470	Val	Ala	Leu	Pro	Pro	Val	Ser	Pro	Gln	Ile	Tyr 480
Pro	Asn	Glu	Arg	His	Ser	Ile	Arg	Cys	Pro	Glu	Ser	Gly	Glu	His	Tyr

485 490 495  
Glu Val Thr Leu Leu His Phe Leu Gln Glu Tyr Leu  
500 505

<210> 5385  
<211> 314  
<212> DNA  
<213> Homo sapiens

<400> 5385  
agatctcagc agatggggac cccagctggc actgggtggc atttcttctt cccttgctct  
60  
acttgagca tatgttggtc gtggaaccga aaggaacgta gcaaaaagag tgttcccagc  
120  
cctccccggg cccagccgct gggcagaggg ctgcatgctg gctggctggc caggctgggg  
180  
cagcctggcc tcctcgcccc ctacgctgca cccaccttcc acttcctgga gatgcaccca  
240  
catctccagg aaaattgttt cagaaaatgc ctacaacaca gcagagagtg gaacaaacag  
300  
ggtcccaacg catg  
314

<210> 5386  
<211> 100  
<212> PRT  
<213> Homo sapiens

<400> 5386  
Met Gly Thr Pro Ala Gly Thr Gly Trp His Phe Phe Phe Pro Cys Ser  
1 5 10 15  
Thr Trp Ser Ile Cys Cys Ser Trp Asn Arg Lys Glu Arg Ser Lys Lys  
20 25 30  
Ser Val Pro Ser Pro Pro Arg Ala Gln Pro Leu Gly Arg Gly Leu His  
35 40 45  
Ala Gly Trp Leu Ala Arg Leu Gly Gln Pro Gly Leu Leu Gly Pro Tyr  
50 55 60  
Ala Ala Pro Thr Phe His Phe Leu Glu Met His Pro His Leu Gln Glu  
65 70 75 80  
Asn Cys Phe Arg Lys Cys Leu Gln His Ser Arg Glu Trp Asn Lys Gln  
85 90 95  
Gly Pro Asn Ala  
100

<210> 5387  
<211> 375  
<212> DNA  
<213> Homo sapiens

<400> 5387  
ntggactccc ccagggttcag caggatggcg atggccgcta ggatgaagca gatggcgtac  
60  
accgccacgc accagtccat gggcaactgg tccatgttca cctggtgctt ctgcttctcc  
120

atgaccctga tcattctcat cgtggagctg tgcgggctcc aggcccgctt cccctgtct  
180  
tggcgcaact tccccatcac cttegctgc tatgcggccc tcttctgcct ctgggctcc  
240  
atcatctacc ccaccaccta tgtccagttc ctgtcccacg gccgttcgcy ggaccacgcc  
300  
atcgccgcca ccttctcttc ctgcatcgcy tgtgtggctt acgccaccga aatggcctgg  
360  
acccggggccc gggcc  
375

&lt;210&gt; 5388

&lt;211&gt; 125

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5388

Xaa	Asp	Ser	Pro	Arg	Phe	Ser	Arg	Met	Ala	Met	Ala	Ala	Arg	Met	Lys
1			5					10					15		
Gln	Met	Ala	Tyr	Thr	Ala	Thr	His	Gln	Ser	Met	Gly	Asn	Trp	Ser	Met
		20					25					30			
Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Met	Thr	Leu	Ile	Ile	Leu	Ile	Val
	35					40				45					
Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro	Leu	Ser	Trp	Arg	Asn	Phe
	50				55				60						
Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu	Phe	Cys	Leu	Ser	Ala	Ser
65				70				75				80			
Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe	Leu	Ser	His	Gly	Arg	Ser
		85				90						95			
Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe	Ser	Cys	Ile	Ala	Cys	Val
		100				105						110			
Ala	Tyr	Ala	Thr	Glu	Met	Ala	Trp	Thr	Arg	Ala	Arg	Ala			
	115					120						125			

&lt;210&gt; 5389

&lt;211&gt; 1711

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5389

nncgagcggc agggggccaa acacaaaagg gagccggaga agccctagcc gctgcccagc  
60  
agcttgcggg cgtgttctcg cggttccggg cctcaaggcg acggaaacga aaggcgagcg  
120  
aagcgcgag gatccggcga gaagaagcgt cagggagcct cggcggtgtc cccgggggtcc  
180  
gccgaagcca cccggccgcc ggctggggcc cggggtggtg aggaagtgtc ccgaggcctc  
240  
gccgaggcct agcgccggct ttgtgtccga ggcggcgggc gcggcggggg gaggcggagc  
300  
cgggggcggc ctgcgggaag gcctctcttc cgccgaccgc gcgttttcgg cctaggccgc  
360  
ggggccgctc gtggcctccg gggagcaggc gccaggggtt tgtgtgcggt gggggcctgg  
420



gcctgggcct ggggaagctg acgccggtcg tccggaagcc aggaggagggc gtgaggccgc  
480  
tcgtggactc cgggcctagg ccctctcccc tcaaccttct cccggggcct gggtcacccc  
540  
aatccacgga gagagagacc cgccgggagg tgcggccgcg ctatggaccc ctgacccccg  
600  
tggggtcgct cggactctta acgtgtggac tgaccgctac tgactgcacc gccaatcccc  
660  
ccgtctctgc cggcccccta gcatgagcga gggggaccca gccgggtgac attgtgcccc  
720  
ttggcggatt ctcgatttcc cctcttcccc gtccctcgcc tccctctccc ccatgaagtg  
780  
attctgagta tcgggggggc tctggattat tgttctgacg aacctctgct tgtggttggg  
840  
gggtatttaa tctgaggcct tagggctcct cgggtgtctt gagtgttttg tgtgtacata  
900  
ttttgtcttt aaagtttata aatatacgta tattgagagt gtccacgtct cctcgctgaa  
960  
ccttaggaat cccttggcac catgtcctgt gtgcattata aattttcctc taaactcaac  
1020  
tatgataccg tcacctttga tgggctccac atctccctct gcgacttaaa gaagcagatt  
1080  
atggggagag agaagctgaa agctgccgac tgcgacctgc agatcaccaa tgcgcagacg  
1140  
aaagaagaat atactgatga taatgctctg attcctaaga attcttctgt aattgttaga  
1200  
agaattccta ttggagggtg taaatctaca agcaagacat atgttataag tcgaactgaa  
1260  
ccagcgatgg caactacaaa agcagtatgt aaaaacacaa tctcacactt tttctacaca  
1320  
ttgcttttac ctttataatg tagcagttaa gtaaatcatt ttagaactta atatccaact  
1380  
gatcatagta catattgtaa ataaaatgta ttttgatgac agctcagttg aatatggata  
1440  
atatgtggca tcacttgac acttattttg tagaaatggg taatttgtgc ccgtaacact  
1500  
gtttcatatt aaatatgata gcattatccc tgtatgacac tgtgtgttac agttaatgta  
1560  
tgatcctttt tagatcgttt aggttttaca ctaaggaaca tgatgacatg ttctacattt  
1620  
gtctgtctat agttagtatt ttgtatgtat gtacaggctg ttgtgtgctt tttgtttctt  
1680  
gcaataaaaa atgtttggag tgtatatattt g  
1711

&lt;210&gt; 5390

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5390

Met	Ser	Cys	Val	His	Tyr	Lys	Phe	Ser	Ser	Lys	Leu	Asn	Tyr	Asp	Thr
1				5						10				15	
Val	Thr	Phe	Asp	Gly	Leu	His	Ile	Ser	Leu	Cys	Asp	Leu	Lys	Lys	Gln

20 25 30  
Ile Met Gly Arg Glu Lys Leu Lys Ala Ala Asp Cys Asp Leu Gln Ile  
35 40 45  
Thr Asn Ala Gln Thr Lys Glu Glu Tyr Thr Asp Asp Asn Ala Leu Ile  
50 55 60  
Pro Lys Asn Ser Ser Val Ile Val Arg Arg Ile Pro Ile Gly Gly Val  
65 70 75 80  
Lys Ser Thr Ser Lys Thr Tyr Val Ile Ser Arg Thr Glu Pro Ala Met  
85 90 95  
Ala Thr Thr Lys Ala Val Cys Lys Asn Thr Ile Ser His Phe Phe Tyr  
100 105 110  
Thr Leu Leu Leu Pro Leu  
115

<210> 5391  
<211> 797  
<212> DNA  
<213> Homo sapiens

<400> 5391  
nggctcaaaa cgatcctctc accttgccctt ccaaagtgtt gggattacag gatgagccac  
60  
tgcattcagt ctaaattctc ttttccacat accaaatgaa caaatttatt aaaggtgaat  
120  
aaacagtaca aattattatt attattatta ttgagacagg gtcttgctct gtcattcagg  
180  
ctaaagtgca gtggcacaat caagggtcac tgcaacctca gcctcaacct cctggggtca  
240  
agcaatcctc ctgcctcagc ctcttgagca gcagggacta caggtgcaca ccaccatgtc  
300  
cagctacttt ttttattctt tgtagagaca ggggtctcact acattaccct ggctgggtctc  
360  
aaacttctgg gctcaaatga tcttcccgcc tcagcctccc aaaactctgg catgagccac  
420  
tatgctcagc ctcatatag gatttttatt aagctttttt tttccctacc aattgccagc  
480  
caatttattt taaaaataca ggtttctggc ttcttttgca aagtcaaate tggcaacact  
540  
ggaccaacat ttccaccagg ctgcaatggt ctgaaactga cttgagccca tgtgcactgg  
600  
aagggccctg cctctggccc ctctgggact tgtggctgcc ctttagatgg gaatccactt  
660  
ttctgttcac cgcactctct accgctctct attgcacctg acccagctgc tatataggat  
720  
agtaacatta attccctggc tcccccaaag catttgagtc tgcaacccat gtgctggatg  
780  
gatgtagggg gccacag  
797

<210> 5392  
<211> 55  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 5392

Thr Asn Leu Leu Lys Val Asn Lys Gln Tyr Lys Leu Leu Leu Leu Leu  
 1 5 10 15  
 Leu Leu Arg Gln Gly Leu Ala Leu Ser Phe Arg Leu Lys Cys Ser Gly  
 20 25 30  
 Thr Ile Lys Gly His Cys Asn Leu Ser Leu Asn Leu Leu Gly Ser Ser  
 35 40 45  
 Asn Pro Pro Ala Ser Ala Ser  
 50 55

&lt;210&gt; 5393

&lt;211&gt; 4837

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5393

nnagtatcta gggcgggagg cgacatggag acaggggcgg ccgagctgta tgaccaggcc  
 60  
 cttttgggca tcctgcagca cgtgggcaac gtccaggatt tcctgcgcgt tctctttggc  
 120  
 ttctctacc gcaagacaga cttctatcgc ttgctgcgcc acccatcgga ccgcatgggc  
 180  
 ttcccgcgcg gggccgcgca ggccttggtg ctgcaggtat tcaaacctt tgaccacatg  
 240  
 gcccgtcagg atgatgagaa gagaaggcag gaacttgaag agaaaatcag aagaaaggaa  
 300  
 gaggaagagg ccaagactgt gtcagctgct gcagctgaga aggagccagt ccagttcca  
 360  
 gtccaggaaa tagagattga ctccaccaca gaattggatg ggcatcagga agtagagaaa  
 420  
 gtgcagcctc caggccctgt gaaggaaatg gcccatgggt cacaggaggc agaagctcca  
 480  
 ggagcagttg ctggtgctgc tgaagtcctt aggggaaccac caattcttcc caggattcag  
 540  
 gagcagttcc agaaaaatcc cgacagttac aatggtgctg tccgagagaa ctacacctgg  
 600  
 tcacaggact atactgacct ggaggtcagg gtgccagtac ccaagcacgt ggtgaaggga  
 660  
 aagcaggtct cagtggccct tagcagcagc tccattcgtg tggccatgct ggaggaaaat  
 720  
 ggggagcgcg tcctcatgga agggaaagctc acccacaaga tcaacactga gagttctctc  
 780  
 tggagtctcg agcccgggaa gtgcgttttg gtgaacctga gcaagggtgg cgagtattgg  
 840  
 tggaacgcca tcctggaggg agaagagccc atcgacattg acaagatcaa caaggagcgc  
 900  
 tccatggcca ccgtggatga ggaggaacag gcggtgttgg acaggcttac ctttgactac  
 960  
 caccagaagc tgcagggcaa gccacagagc catgagctga aagtccatga gatgctgaag  
 1020  
 aaggggtggg atgctgaagg ttctcccttc cgaggccagc gattcgacct tgccatgttc  
 1080  
 aacatctccc cgggggctgt gcagttttta tgaccagaag gaaaggaaac cctcgccggt  
 1140

ggggaggcag agccttatcc tcggctgccc ttcttggtc cctgcattcc agggacttgc  
1200  
tcgtcttgtt tacccttagc catcctttct ttcaagggtg aaccaggcct tccaccctga  
1260  
ccttgcatct ccagactgtt ccagagaagg tgcggggcca gctgctatgt ggtggccgct  
1320  
gtggctgaca ctgagtgaag gtgtttgaaa tgcaggagag gatatcccag caaattggga  
1380  
tcacatgctt ttgtctccac agcaaccagc cactgcaggc agcatgtctt tccctcccctg  
1440  
ctctctgctt gctgttgttt tgacgctatt ctgcttgcat gtcttctggt tgggatgtgg  
1500  
agttgttgct ggactctcag gcgaagctga agtcattgaa gtgtgtgaag ctctgtgctt  
1560  
gcatgagggc aagcaaggaa tggctgtgcc tgaggctgct ctgggaaact ccttgcccct  
1620  
tgacctcttt tgagagcatt cacgtggtct tcttgctcat ccccttataa atgtgctttg  
1680  
cctgcctcag cctcatggtc agagcagtggt agactggagc cctgtttgca cgttctagtt  
1740  
gttcggagaa agcctagggt ctgggctcag gtccagatgc agcggggatt ctgttctctg  
1800  
actgtggcga ccttgctttg gttcttggtt aagtgaacca agcccgcca ccacgcatgg  
1860  
catgctgtgc ttggctcccc ataagacgtc ctctttgggt gcacggtgtc aaagtgtggg  
1920  
caggagtgga gagctgggtc cctcaggagg agaccacagc atgtccatca gctcagcaga  
1980  
gctcgacagc cacaagtcct gagaagcttt gaccttgaag ggcttctggg agaggaggaa  
2040  
tttctgcatg gggcgtgaag gcacactgtc ccaccacaac tgaaccagaa gagagtgaag  
2100  
actccccctt tcccatcctc tgtgccaggt gccagactgt gctccttggg acttatggcc  
2160  
caatcttacc tgttctccag ggactggcca ctgctcagg accccaagc ctatgccctg  
2220  
agccatggct gctgactgac tccagccaag gtgcaaagac gagattatga gacaggtcct  
2280  
caggcctgtg ttccaagtac tcacaggggc tctgggtgcc catcgccggg agtatggttc  
2340  
agctgccacc ggcactgtcc atttgcctgt ctgtcaagct cagagcatgg ataagccaca  
2400  
cagcaggcca gtgcaccctg gcaccatgca cggccagcaa gaatcaaggc ccgcagatgc  
2460  
taagagggcc tattgtcagg ggaaggctcc cgctcctgca cactctctat ggatacttgg  
2520  
gttgtggggg ctctcttggg gagtaagttt gtggtttgtt tctggtttac agtgggtggc  
2580  
gacacccctt gtaagaaagc attcctggga agtcttctgt ggggtccaaac atgttgctcc  
2640  
gatcatcaca ggagagcaaa aggccctaga taccctctt ggaatgtgag agtcttgttg  
2700  
tctgatattt gccactgagc tgggtgaagc cctctaaaga gatctcgacc ctggggagca  
2760

gaattcttgt catctatgag gggtcctgag aaagacttgt cttttttttt cctggagttc  
2820  
ttcccatga ggtcctagga tttgcacacc actgtcccac aagagctttc ctgcctaata  
2880  
aaaggaggtc ttgtggtgtg tgtctctct cttctctata gttcccgagt tggcccccac  
2940  
tgcagccccc accctgtggg tagtcttcca gaagtgatgc agtggtgtga gatgcctac  
3000  
accttggtat ttgggagact ttgagagtca ttcacttcca tggtgactag tgtttgtttt  
3060  
gcctgatttt atattctgtg ttgcattttt cccactccc tgccctgctt taataaacag  
3120  
caaaccaata tctaggaaga atgactgagg gatagtattg ggtattggcc ccatggcagg  
3180  
aacagccact tgcactgtgt cccggtgcca cactgcggtg cttggtgtgg ttgtggagcc  
3240  
tgtccctgcg cgccttgcct ccggtgagcc acgctgtctg gtgggtgatt ctctgccctg  
3300  
agccaccacc ctggactggc ccagtctcca gagctggcac accctgcctg tttctctttt  
3360  
ttagacacaa cagccgcagt ttggccagcc actaagtccc accagctgag gtccgaggaa  
3420  
agcggggtga ctcatctccc ttgtccaggg cccgaggaga gtgagggtgc cagcctgcaa  
3480  
agctattcca gtccttgggt gttggtttgc aataaattgg tatttaagca gttctgggtc  
3540  
tgcgtgtgac atttgctgct gagacagttc tgtctgtgca tggtcattat tgttgcatc  
3600  
tagccttgag gtcccaggcc aacgtacaca gcaaaccacca gcatggggaa ttcttagggg  
3660  
ttgtttccca tctggtctga atgcactggg caagatctca atacagcttt agaaatcctg  
3720  
taagattttg accagtgggg agaaaaagaa tgtagctata gatcttacat ctttcaaac  
3780  
aggttctgga attctgtagt tactggaaag cttaggggtga gtgcagagtt gggaatgatt  
3840  
ccactgaagg gccacctttg cccaccaggc tccaaggccc tccttgggtc ccaggtgcat  
3900  
acctgctgtt aactttgctg agccctcgca atgggcttcc tccaggacat aacgccgtgt  
3960  
ctgacacaga agtctcccag gtggctggcc acctgcttct tcctcagtca gatctttgac  
4020  
tctccttctc tgtgccacc ccactctcag cctcctctga cctgctcac ccctggggac  
4080  
aggacctagg ggtgtgagaa gtacttggct gaataaagac tgtttcaaag gcaatcctta  
4140  
gaattgccta gcatactccc agggccagaa ataaccgcc agaaaggaga ggcgtatttg  
4200  
ccctgaaga gtgcaggagg gagaacagtt gagaagtgtt ttgtgtggaa atgtgtccaa  
4260  
gaggcgtcag ctgctgcaca gagaactcac tgcccagaac actgcgcttg gggaacagac  
4320  
ctaccccca cctcaaactc gctctccact gggcctgttg gcagccagct cagctgggga  
4380

agggacagca tgactcgctt tgtcgatgaa aagcacgaag ttgtcagcac agaacctggc  
 4440  
 cagtccttga gaaactccct ccttggtggt cagaggtcaa gcagcccatg tggcccacgg  
 4500  
 tcctgaagaa ctgggctatg tccctgaggc tcctctctac cgtctgactg tggggctctgg  
 4560  
 ggaacaggca tttaaaccag gctgctgccc tggggagtgc ccactggacg ccagggtgcc  
 4620  
 ccatagggac aggggtcaca agccctgggg cttccctgct cagtcctggt gaggacagt  
 4680  
 tggtcactat ctcagagaga cgaaaaatga atattctgtc atttcagact aaactactca  
 4740  
 ccagctcac actaatatgg atttggttaat ttacaccttt tttttctttc caactttagg  
 4800  
 ttcaagggtt gttacatggg taaattggat catagggg  
 4837

<210> 5394

<211> 354

<212> PRT

<213> Homo sapiens

<400> 5394

Leu	Tyr	Asp	Gln	Ala	Leu	Leu	Gly	Ile	Leu	Gln	His	Val	Gly	Asn	Val
1				5					10					15	
Gln	Asp	Phe	Leu	Arg	Val	Leu	Phe	Gly	Phe	Leu	Tyr	Arg	Lys	Thr	Asp
			20					25					30		
Phe	Tyr	Arg	Leu	Leu	Arg	His	Pro	Ser	Asp	Arg	Met	Gly	Phe	Pro	Pro
			35				40					45			
Gly	Ala	Ala	Gln	Ala	Leu	Val	Leu	Gln	Val	Phe	Lys	Thr	Phe	Asp	His
	50					55				60					
Met	Ala	Arg	Gln	Asp	Asp	Glu	Lys	Arg	Arg	Gln	Glu	Leu	Glu	Glu	Lys
65					70					75					80
Ile	Arg	Arg	Lys	Glu	Glu	Glu	Glu	Ala	Lys	Thr	Val	Ser	Ala	Ala	Ala
			85					90						95	
Ala	Glu	Lys	Glu	Pro	Val	Pro	Val	Pro	Val	Gln	Glu	Ile	Glu	Ile	Asp
			100					105					110		
Ser	Thr	Thr	Glu	Leu	Asp	Gly	His	Gln	Glu	Val	Glu	Lys	Val	Gln	Pro
			115				120					125			
Pro	Gly	Pro	Val	Lys	Glu	Met	Ala	His	Gly	Ser	Gln	Glu	Ala	Glu	Ala
	130					135					140				
Pro	Gly	Ala	Val	Ala	Gly	Ala	Ala	Glu	Val	Pro	Arg	Glu	Pro	Pro	Ile
145					150					155					160
Leu	Pro	Arg	Ile	Gln	Glu	Gln	Phe	Gln	Lys	Asn	Pro	Asp	Ser	Tyr	Asn
			165					170						175	
Gly	Ala	Val	Arg	Glu	Asn	Tyr	Thr	Trp	Ser	Gln	Asp	Tyr	Thr	Asp	Leu
			180					185					190		
Glu	Val	Arg	Val	Pro	Val	Pro	Lys	His	Val	Val	Lys	Gly	Lys	Gln	Val
			195				200					205			
Ser	Val	Ala	Leu	Ser	Ser	Ser	Ser	Ile	Arg	Val	Ala	Met	Leu	Glu	Glu
	210					215					220				
Asn	Gly	Glu	Arg	Val	Leu	Met	Glu	Gly	Lys	Leu	Thr	His	Lys	Ile	Asn
225					230					235					240
Thr	Glu	Ser	Ser	Leu	Trp	Ser	Leu	Glu	Pro	Gly	Lys	Cys	Val	Leu	Val

										245						250						255		
Asn	Leu	Ser	Lys	Val	Gly	Glu	Tyr	Trp	Trp	Asn	Ala	Ile	Leu	Glu	Gly									
			260						265						270									
Glu	Glu	Pro	Ile	Asp	Ile	Asp	Lys	Ile	Asn	Lys	Glu	Arg	Ser	Met	Ala									
			275						280						285									
Thr	Val	Asp	Glu	Glu	Glu	Gln	Ala	Val	Leu	Asp	Arg	Leu	Thr	Phe	Asp									
			290						295						300									
Tyr	His	Gln	Lys	Leu	Gln	Gly	Lys	Pro	Gln	Ser	His	Glu	Leu	Lys	Val									
			305						310						315									
His	Glu	Met	Leu	Lys	Lys	Gly	Trp	Asp	Ala	Glu	Gly	Ser	Pro	Phe	Arg									
			325						330						335									
Gly	Gln	Arg	Phe	Asp	Pro	Ala	Met	Phe	Asn	Ile	Ser	Pro	Gly	Ala	Val									
			340						345						350									
Gln Phe																								

```
<210> 5395
<211> 3711
<212> DNA
<213> Homo sapiens
```

<400>	5395				
cccggggccc	caggagcagt	aggtgttagc	agcttggtcg	cgacaggtgc	gctaggtaga
60					
gcgcccgggac	ctgtgacagg	gctggtagca	gcgcagagga	aaggcggcctt	ttagccaggt
120					
atttcagtgt	ctgtagacag	gatggaatca	tctccattta	atagacggca	atggacctca
180					
ctatcattga	gggtaacagc	caaagaactt	tctcttgtca	acaagaacaa	gtcatcggct
240					
attgtggaag	tattctccaa	gtaccagaaa	gcagctgaag	aaacaaacat	ggagaagaag
300					
agaagtaaca	ccgaaaatct	ctcccagcac	tttagaaagg	ggaccctgac	tgtgttaaag
360					
aagaagtggg	agaaccagg	gctgggagca	gagtctcaca	cagactctct	acggaacagc
420					
agcactgaga	ttaggcacag	agcagaccat	cctcctgctg	aagtgacaag	ccacgctgct
480					
tctggagcca	aagctgacca	agaagaacaa	atccacccca	gatctagact	caggtcacct
540					
cctgaagccc	tcgttcaggg	tcgatatccc	cacatcaagg	acggtgagga	tcttaaagac
600					
cactcaacag	aaagtaaaaa	aatggaaaat	tgtctaggag	aatccaggca	tgaagtagaa
660					
aaatcagaaa	tcagtgaaaa	cacagatgct	tcgggcaaaa	tagagaaata	taatgttccg
720					
ctgaacaggc	ttaagatgat	gtttgagaaa	ggatgaacaa	ctcaaactaa	gattctccgg
780					
gcccaaagcc	gaagtgcaag	tggaaggaag	atctctgaaa	acagctattc	tctagatgac
840					
ctggaaatat	gcccagggtca	gttgtcatct	tctacatttg	actcggagaa	aatgagagt
900					
agacgaaatc	tggaacttcc	acgcctctca	gaaacctcta	taaaggatcg	aatggccaag
960					

taccaggcag ctgtgtccaa acaaagcagc tcaaccaact atacaaatga gctgaaagcc  
1020  
agtgggtggcg aaatcaaaat tcataaaatg gagcaaaagg agaatgtgcc cccagggtcct  
1080  
gagggtctgca tcacccatca ggaaggggaa aagatttctg caaatgagaa tagcctggca  
1140  
gtccgttcca cccctgccga agatgactcc ccagggtgact cccagggttaa gaggtagggt  
1200  
caacagcctg tccatcccaa gccactaagt ccagattcca gagcctccag tctttctgaa  
1260  
agttctcctc ccaaagcaat gaagaagttt caggcacctg caagagagac ctgctggaa  
1320  
tgtcagaaga cagtctatcc aatggagcgt ctcttggcca accagcaggt gtttcacatc  
1380  
agctgcttcc gttgtccta ttgcaacaac aaactcagtc taggaacata tgcattctta  
1440  
catggaagaa tctattgtaa gcctcacttc aatcaactct ttaaactctaa gggcaactat  
1500  
gatgaaggct ttgggcacag accacacaag gatctatggg caagcaaaaa tgaaaacgaa  
1560  
gagattttgg agagaccagc ccagcttgca aatgcaaggg agaccctca cagcccaggg  
1620  
gtagaagatg cccctattgc taagggtgggt gtcctggctg caagtatgga agccaaggcc  
1680  
tcctctcagc aggagaagga agacaagcca gctgaaacca agaagctgag gatcgctgg  
1740  
ccacccccca ctgaacttgg aagttcagga agtgccttgg aggaagggat caaatgtca  
1800  
aagcccaaat ggcctcctga agacgaaatc agcaagcccg aagttcctga ggatgtcgat  
1860  
ctagatctga agaagctaag acgatcttct tctactgaagg aaagaagccg cccattcact  
1920  
gtagcagctt catttcaaag cacctctgtc aagagcccaa aaactgtgtc cccacctatc  
1980  
aggaaaggct ggagcatgtc agagcagagt gaagagtctg tgggtggaag agttgcagaa  
2040  
aggaaacaag tggaaaatgc caaggcttct aagaagaatg ggaatgtggg aaaaacaacc  
2100  
tggcaaaaca aagaatctaa aggagagaca gggaagagaa gtaaggaagg tcatagtttg  
2160  
gagatggaga atgagaatct tgtagaaaat ggtgcagact ccgatgaaga tgataacagc  
2220  
ttcctcaaac aacaatctcc acaagaaccc aagtctctga attggctgag tttttagac  
2280  
aacacctttg ctgaagaatt cactactcag aatcagaaat cccaggatgt ggaactctgg  
2340  
gagggagaag tggtaaaga gctctctgtg gaagaacaga taaagagaaa tcggtattat  
2400  
gatgaggatg aggatgaaga gtgacaaatt gcaatgatgc tgggccttaa attcatgtta  
2460  
gtgttagcga gccactgcc tttgtcaaaa tgtgatgcac ataagcaggt atcccagcat  
2520  
gaaatgtaat ttacttgga gtaactttgg aaaagaattc cttcttaaaa tcaaaaacaa  
2580



```
<210> 5396
<211> 760
<212> PRT
<213> Homo sapiens
```

```

<400> 5396
Met Glu Ser Ser Pro Phe Asn Arg Arg Gln Trp Thr Ser Leu Ser Leu
  1              5              10              15
Arg Val Thr Ala Lys Glu Leu Ser Leu Val Asn Lys Asn Lys Ser Ser
          20              25              30
Ala Ile Val Glu Ile Phe Ser Lys Tyr Gln Lys Ala Ala Glu Glu Thr
          35              40              45
Asn Met Glu Lys Lys Arg Ser Asn Thr Glu Asn Leu Ser Gln His Phe
          50              55              60
Arg Lys Gly Thr Leu Thr Val Leu Lys Lys Lys Trp Glu Asn Pro Gly

```

4579

500 505 510  
Ala Ser Ser Gln Gln Glu Lys Glu Asp Lys Pro Ala Glu Thr Lys Lys  
515 520 525  
Leu Arg Ile Ala Trp Pro Pro Pro Thr Glu Leu Gly Ser Ser Gly Ser  
530 535 540  
Ala Leu Glu Glu Gly Ile Lys Met Ser Lys Pro Lys Trp Pro Pro Glu  
545 550 555 560  
Asp Glu Ile Ser Lys Pro Glu Val Pro Glu Asp Val Asp Leu Asp Leu  
565 570 575  
Lys Lys Leu Arg Arg Ser Ser Ser Leu Lys Glu Arg Ser Arg Pro Phe  
580 585 590  
Thr Val Ala Ala Ser Phe Gln Ser Thr Ser Val Lys Ser Pro Lys Thr  
595 600 605  
Val Ser Pro Pro Ile Arg Lys Gly Trp Ser Met Ser Glu Gln Ser Glu  
610 615 620  
Glu Ser Val Gly Gly Arg Val Ala Glu Arg Lys Gln Val Glu Asn Ala  
625 630 635 640  
Lys Ala Ser Lys Lys Asn Gly Asn Val Gly Lys Thr Thr Trp Gln Asn  
645 650 655  
Lys Glu Ser Lys Gly Glu Thr Gly Lys Arg Ser Lys Glu Gly His Ser  
660 665 670  
Leu Glu Met Glu Asn Glu Asn Leu Val Glu Asn Gly Ala Asp Ser Asp  
675 680 685  
Glu Asp Asp Asn Ser Phe Leu Lys Gln Gln Ser Pro Gln Glu Pro Lys  
690 695 700  
Ser Leu Asn Trp Ser Ser Phe Val Asp Asn Thr Phe Ala Glu Glu Phe  
705 710 715 720  
Thr Thr Gln Asn Gln Lys Ser Gln Asp Val Glu Leu Trp Glu Gly Glu  
725 730 735  
Val Val Lys Glu Leu Ser Val Glu Glu Gln Ile Lys Arg Asn Arg Tyr  
740 745 750  
Tyr Asp Glu Asp Glu Asp Glu Glu  
755 760

<210> 5397  
<211> 561  
<212> DNA  
<213> Homo sapiens

<400> 5397  
tttttttttt gcgaatctgt tgattttattt acggctcggt gagacgacgc tggacgctgg  
60  
ttagggttaag ggtagggca agcattagca gcaggggcat ggcctggga agcacctgga  
120  
ccccagaaca taagacagga gggagagatg ccatccattc agcgggcact tatgcccacg  
180  
accagctgag ccagaccagc attcccatth caccaccct tactcctcaa gatgcaaagt  
240  
aagctcaggg ctgggcggaa gctggcaggg ctgtccacag ggaggacccc cgtgtgtctc  
300  
tcgggctgcc caggtggctc tgtccaccct tctgtctggg aggcctctta aggctgggga  
360  
gggcccagag ggaaggagat cctgaggggc tggcagattc aggcctccc tgcgagctga  
420

ggtttgaaga ggagagcaga ccacccagag tagtgggaga aagcaccggc agaaaagctg  
480  
gcatatccac cgagggcctc tctgcttctt ttgacctttt tcagagtttc agagttatga  
540  
accaaatcgc cttcatgaga g  
561

<210> 5398  
<211> 154  
<212> PRT  
<213> Homo sapiens

<400> 5398  
Met Ala Leu Gly Ser Thr Trp Thr Pro Glu His Lys Thr Gly Gly Arg  
1 5 10 15  
Asp Ala Ile His Ser Ala Gly Thr Tyr Ala His Asp Gln Leu Ser Gln  
20 25 30  
Thr Ser Ile Pro Ile Ser Pro Pro Leu Thr Pro Gln Asp Ala Asn Glu  
35 40 45  
Ala Gln Gly Trp Ala Glu Ala Gly Arg Ala Val His Arg Glu Asp Pro  
50 55 60  
Arg Val Ser Leu Gly Leu Pro Arg Trp Leu Cys Pro Pro Phe Cys Leu  
65 70 75 80  
Gly Gly Ser Leu Arg Leu Gly Arg Ala Gln Arg Glu Gly Asp Pro Glu  
85 90 95  
Gly Leu Ala Asp Ser Gly Pro Pro Cys Glu Leu Arg Phe Glu Glu Glu  
100 105 110  
Ser Arg Pro Pro Arg Val Val Gly Glu Ser Thr Gly Arg Lys Ala Gly  
115 120 125  
Ile Ser Thr Glu Gly Leu Ser Ala Ser Phe Asp Leu Phe Gln Ser Phe  
130 135 140  
Arg Val Met Asn Gln Ile Ala Phe Met Arg  
145 150

<210> 5399  
<211> 835  
<212> DNA  
<213> Homo sapiens

<400> 5399  
ncggccgcgc aacaaaggag tcacccggcg atgagccccg gcacccccgg accgaccatg  
60  
ggcagatccc agggcagccc aatggatcca atggtgatga agagacctca gttgtatggc  
120  
atgggcagta accctcattc tcagcctcag cagagcagtc cgtaccagg aggttcctat  
180  
ggcctccag gccacagcg gtatccaatt ggcaccagg gtcggactcc cggggccatg  
240  
gccggaatgc agtaccctca gcagcagatg ccacctcagt atggacagca aggtgtgagt  
300  
ggttactgcc agcagggcca acagccatat tacagccagc agccgcagcc cccgcacctc  
360  
ccacccagg cgcagtatct gccgtcccag tcccagcaga ggtaccaggc gcagcaggac  
420

atgtctcagg aaggctatgg aactagatct caacctcttc tggcccccg aaaacctaac  
480  
catgaagact tgaacttaac acagcaagaa agaccatcaa gtttaccagt aagacattat  
540  
tgtgctgatt tggaaatgta atgagttaaa gactttttaga aagagctggt gtttttggtt  
600  
gttctacttt atattatgac atgattgaga agtttctaga cttcagggtt attttggtgt  
660  
caatttttca aggtttacct ttagggagct ctgtagtcct ggataagtct atttcatgtg  
720  
tatatatctc tggtgcagag tgtagacatc agttggaagg ttttatgcgg ctggtcgatt  
780  
ttgtgtgcag gtggttattg ctgccaaaaa gcaacagcct aaagaaagct caact  
835

<210> 5400

<211> 186

<212> PRT

<213> Homo sapiens

<400> 5400

Xaa	Ala	Ala	Gln	Gln	Arg	Ser	His	Pro	Ala	Met	Ser	Pro	Gly	Thr	Pro				
1			5					10					15						
Gly	Pro	Thr	Met	Gly	Arg	Ser	Gln	Gly	Ser	Pro	Met	Asp	Pro	Met	Val				
		20						25				30							
Met	Lys	Arg	Pro	Gln	Leu	Tyr	Gly	Met	Gly	Ser	Asn	Pro	His	Ser	Gln				
		35					40				45								
Pro	Gln	Gln	Ser	Ser	Pro	Tyr	Pro	Gly	Gly	Ser	Tyr	Gly	Pro	Pro	Gly				
		50				55					60								
Pro	Gln	Arg	Tyr	Pro	Ile	Gly	Ile	Gln	Gly	Arg	Thr	Pro	Gly	Ala	Met				
65					70					75					80				
Ala	Gly	Met	Gln	Tyr	Pro	Gln	Gln	Gln	Met	Pro	Pro	Gln	Tyr	Gly	Gln				
			85						90					95					
Gln	Gly	Val	Ser	Gly	Tyr	Cys	Gln	Gln	Gly	Gln	Gln	Pro	Tyr	Tyr	Ser				
		100							105				110						
Gln	Gln	Pro	Gln	Pro	Pro	His	Leu	Pro	Pro	Gln	Ala	Gln	Tyr	Leu	Pro				
		115					120					125							
Ser	Gln	Ser	Gln	Gln	Arg	Tyr	Gln	Pro	Gln	Gln	Asp	Met	Ser	Gln	Glu				
		130				135					140								
Gly	Tyr	Gly	Thr	Arg	Ser	Gln	Pro	Pro	Leu	Ala	Pro	Gly	Lys	Pro	Asn				
145					150					155					160				
His	Glu	Asp	Leu	Asn	Leu	Ile	Gln	Gln	Glu	Arg	Pro	Ser	Ser	Leu	Pro				
			165						170					175					
Val	Arg	His	Tyr	Cys	Ala	Asp	Leu	Glu	Met										
			180					185											

<210> 5401

<211> 2674

<212> DNA

<213> Homo sapiens

<400> 5401

nccctttcaa aagaagggtgc ccccgccctt ggcccgtggg taacgccatt taaggcccg  
60

ccccgggaat tttgggccag gtgtaagcgc cegtgtcccc gccacgtcgc ggacatggtg  
120  
atttcagaaa gtatggatat actcttcaga ataagaggag gccttgattt ggcttttcag  
180  
ctagctactc ctaatgaaat ttttctcaag aaggcactga aacatgtgtt gagtgacctg  
240  
tcaactaagc tgtcttcaaa cgcccttggtg ttcagaattt gccacagttc agtgtatata  
300  
tggcctagca gtgacataaa caccattcct ggagaactga ctgatgcttc tgcttgtaag  
360  
aacatactgc gctttattca atttgagcca gaagaagata taaaaagaaa attcatgaga  
420  
aagaaggaca aaaagttatc agacatgcat caaatagtaa atatagatct tatgctggaa  
480  
atgtcaacct ccctggcagc tgtaacgccc atcattgaaa gggaaagcgg aggacaccat  
540  
tatgttaata tgactttacc tgcgatgca gttatatctg ttgctccaga agaaacatgg  
600  
ggaaaagttc gtaagctcct gggtgatgca attcataatc aactaactga catggaaaaa  
660  
tgtattttga aatatatgaa aagaacatct attgtggtcc ctgaaccact gcacttttta  
720  
ttaccaggga aaaaaaatct tgtaacaatt tcatatcctt caggaatacc agatggccag  
780  
ctgcaggcct ataggaagga gttacatgat cttttcaatc tgcttcacga cagaccctat  
840  
ttcaaaaggt ctaatgctta tcactttcca gatgagccat acaaagatgg ttacattaga  
900  
aatccacata cttaccttaa tccacctaac atggagactg gtatgattta tgtggtccag  
960  
ggcatatatg gctatcatca ttatatgcag gatcgcatag atgacaatgg ctggggctgt  
1020  
gcttatcgat ctctgcagac tatctgctct tggttcaaac atcagggata cacagagagg  
1080  
tccattccaa cacacagaga aattcagcag gctctagtcg atgccgggga caaaccagca  
1140  
acatttgctg gatcgcgga atggattgga tctattgagg tgcagctggt actaaaccaa  
1200  
ttgatcggtg taacgtcaaa aatcctgttt gtcagccaag gttcagaaat tgctctcaa  
1260  
ggacgggaac tggctaata tttccaaagt gaaggaaactc cagttatgat cgggggagga  
1320  
gttttggccc acacaatact aggagttgca tggaatgaga ttacagggca gataaagttt  
1380  
ctgattctag atccacatta taccggtgct gaagacctgc aagttatttt ggaaaagggc  
1440  
tggtgcggat ggaagggcc agatttttgg aacaaggatg catactataa cttatgtctt  
1500  
cctcagcgac caaatatgat ttaaaatata ttggagtcaa agactgcagt agagtggat  
1560  
tataaatttg tgaataaaga atcagtttaa tttttcacat taaatcctgg ttctagtttg  
1620  
accatttaaa ttatgacctt tttcaaaggt tgtaataact gcacggagaa tgtattttta  
1680

gacgttcctt taataactta aaagacaaag catacacaac cagcatatta taggcatgta  
 1740  
 aatacatgtg ttctttaaag gatcttcact tggaagaaag tttttcgtcc ttctcagaag  
 1800  
 gagattagac acaacatatg gtaaagccaa aagcaggagc ttatagattt gcatgaaatg  
 1860  
 aaggcgttct tcagacttct tcataaccca cgtgacatct gtttttaaaa acacgttaac  
 1920  
 attaaaaaact tttttttaa aagagtttta tccccaaact tccaccatgc agtcccattt  
 1980  
 ttggtctcta gactctggta agtataacca gtactaaaat gttaatgaga atgaaacaat  
 2040  
 actactagaa atacgagtgt cagtattaaa tggaataata aatgctatgc aaacaagaga  
 2100  
 tcactgcggg aggaaaaaag cagcagctct gagttactta ccagcacttc cttttccac  
 2160  
 tgggtatttc tacacttccg agactccgtt tctgtctgag cacggcaaca caatcattcc  
 2220  
 tgtcaggggtg ttcacttget tttattgtct gcatacatct aattgttgta agaaacttgg  
 2280  
 cacagtctgg aaatccacat gaccaagcga gatcttcagc tgtttgcccg ttcttattac  
 2340  
 ataaactgaa aacaggataa aaacggagtg aaatgaaaca ttgaacttaa gtcttttttt  
 2400  
 tatatcttac aagggaattt tgggctcata caaatgttgg ttgcagaaca gaagaggtaa  
 2460  
 aggatgcata aggaaattgc atttttggtc actattgtat cctcagcaac taacagaatc  
 2520  
 cagcatagag cgggcattcc agttctgaat gaatgttaga attatctgat gtttaataca  
 2580  
 gtgtatgagt acccaaaggt agtcaatggg aactatagaa tgggttttcc tgaaccgaaa  
 2640  
 ctgaagtaga atacagtcac aatgaacaaa attg  
 2674

&lt;210&gt; 5402

&lt;211&gt; 507

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5402

Xaa	Leu	Ser	Lys	Glu	Gly	Ala	Pro	Ala	Leu	Gly	Pro	Trp	Val	Thr	Pro
1				5					10					15	
Phe	Lys	Ala	Arg	Pro	Arg	Glu	Phe	Trp	Ala	Arg	Cys	Lys	Arg	Pro	Cys
		20						25					30		
Pro	Arg	His	Val	Ala	Asp	Met	Val	Ile	Ser	Glu	Ser	Met	Asp	Ile	Leu
		35					40					45			
Phe	Arg	Ile	Arg	Gly	Gly	Leu	Asp	Leu	Ala	Phe	Gln	Leu	Ala	Thr	Pro
	50					55					60				
Asn	Glu	Ile	Phe	Leu	Lys	Lys	Ala	Leu	Lys	His	Val	Leu	Ser	Asp	Leu
65				70					75					80	
Ser	Thr	Lys	Leu	Ser	Ser	Asn	Ala	Leu	Val	Phe	Arg	Ile	Cys	His	Ser
			85					90						95	
Ser	Val	Tyr	Ile	Trp	Pro	Ser	Ser	Asp	Ile	Asn	Thr	Ile	Pro	Gly	Glu

100 105 110  
Leu Thr Asp Ala Ser Ala Cys Lys Asn Ile Leu Arg Phe Ile Gln Phe  
115 120 125  
Glu Pro Glu Glu Asp Ile Lys Arg Lys Phe Met Arg Lys Lys Asp Lys  
130 135 140  
Lys Leu Ser Asp Met His Gln Ile Val Asn Ile Asp Leu Met Leu Glu  
145 150 155 160  
Met Ser Thr Ser Leu Ala Ala Val Thr Pro Ile Ile Glu Arg Glu Ser  
165 170 175  
Gly Gly His His Tyr Val Asn Met Thr Leu Pro Val Asp Ala Val Ile  
180 185 190  
Ser Val Ala Pro Glu Glu Thr Trp Gly Lys Val Arg Lys Leu Leu Val  
195 200 205  
Asp Ala Ile His Asn Gln Leu Thr Asp Met Glu Lys Cys Ile Leu Lys  
210 215 220  
Tyr Met Lys Arg Thr Ser Ile Val Val Pro Glu Pro Leu His Phe Leu  
225 230 235 240  
Leu Pro Gly Lys Lys Asn Leu Val Thr Ile Ser Tyr Pro Ser Gly Ile  
245 250 255  
Pro Asp Gly Gln Leu Gln Ala Tyr Arg Lys Glu Leu His Asp Leu Phe  
260 265 270  
Asn Leu Pro His Asp Arg Pro Tyr Phe Lys Arg Ser Asn Ala Tyr His  
275 280 285  
Phe Pro Asp Glu Pro Tyr Lys Asp Gly Tyr Ile Arg Asn Pro His Thr  
290 295 300  
Tyr Leu Asn Pro Pro Asn Met Glu Thr Gly Met Ile Tyr Val Val Gln  
305 310 315 320  
Gly Ile Tyr Gly Tyr His His Tyr Met Gln Asp Arg Ile Asp Asp Asn  
325 330 335  
Gly Trp Gly Cys Ala Tyr Arg Ser Leu Gln Thr Ile Cys Ser Trp Phe  
340 345 350  
Lys His Gln Gly Tyr Thr Glu Arg Ser Ile Pro Thr His Arg Glu Ile  
355 360 365  
Gln Gln Ala Leu Val Asp Ala Gly Asp Lys Pro Ala Thr Phe Val Gly  
370 375 380  
Ser Arg Gln Trp Ile Gly Ser Ile Glu Val Gln Leu Val Leu Asn Gln  
385 390 395 400  
Leu Ile Gly Ile Thr Ser Lys Ile Leu Phe Val Ser Gln Gly Ser Glu  
405 410 415  
Ile Ala Ser Gln Gly Arg Glu Leu Ala Asn His Phe Gln Ser Glu Gly  
420 425 430  
Thr Pro Val Met Ile Gly Gly Gly Val Leu Ala His Thr Ile Leu Gly  
435 440 445  
Val Ala Trp Asn Glu Ile Thr Gly Gln Ile Lys Phe Leu Ile Leu Asp  
450 455 460  
Pro His Tyr Thr Gly Ala Glu Asp Leu Gln Val Ile Leu Glu Lys Gly  
465 470 475 480  
Trp Cys Gly Trp Lys Gly Pro Asp Phe Trp Asn Lys Asp Ala Tyr Tyr  
485 490 495  
Asn Leu Cys Leu Pro Gln Arg Pro Asn Met Ile  
500 505

&lt;210&gt; 5403

&lt;211&gt; 451



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5403

gcgccttccc cctcgacggc gccagctcct cggcctctag ctccaggatg tgctcgtcctg  
60  
cacgcgctag ttgcgctgc tggatcaggc tcaggatctc cagcactgac aatggctcct  
120  
tcattcttgg gggctctggg accttgggtg ggggctctgg agctgcctcg cctgcaggca  
180  
ccactctctc agccagggaac gcacgctggg gctntggatc cacgccccag tctcaggaag  
240  
gccagtctcc gggcggcctc ccccgtgcc tcctcgtcgc cgtgggctcg ggtcccatgc  
300  
agccggggcca ggaggccaaa atctgctgag ctctgcgta tccctggtac cagcacacgg  
360  
ccaagaaaag agcggggctg cccatcccca gggctgcctg ccgccggccc ggggcccagc  
420  
ccagccggaa gggggccagg cccgcaagct t  
451

&lt;210&gt; 5404

&lt;211&gt; 150

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5404

Ala	Pro	Ser	Pro	Ser	Thr	Ala	Pro	Ala	Pro	Arg	Pro	Leu	Ala	Pro	Gly
1				5				10				15			
Cys	Ala	Arg	Pro	His	Ala	Leu	Val	Arg	Ala	Ala	Gly	Ser	Gly	Ser	Gly
			20					25				30			
Ser	Pro	Ala	Leu	Thr	Met	Ala	Pro	Ser	Ser	Leu	Gly	Ala	Leu	Gly	Pro
			35				40					45			
Trp	Val	Gly	Ala	Leu	Glu	Leu	Pro	Arg	Leu	Gln	Ala	Pro	Leu	Ser	Gln
	50					55				60					
Pro	Gly	Thr	His	Ala	Gly	Ala	Xaa	Asp	Pro	Arg	Pro	Ser	Leu	Arg	Lys
65				70				75					80		
Ala	Ser	Leu	Arg	Ala	Ala	Ser	Pro	Ala	Ala	Ser	Ser	Ser	Pro	Trp	Ala
			85					90					95		
Arg	Val	Pro	Cys	Ser	Arg	Ala	Arg	Arg	Pro	Lys	Ser	Ala	Glu	Leu	Leu
			100					105					110		
Arg	Ile	Pro	Gly	Thr	Ser	Thr	Arg	Pro	Lys	Lys	Glu	Arg	Gly	Cys	Pro
	115						120					125			
Ser	Pro	Gly	Leu	Pro	Ala	Ala	Gly	Pro	Gly	Pro	Ser	Pro	Ala	Gly	Arg
	130					135					140				
Gly	Pro	Gly	Pro	Gln	Ala										
145					150										

&lt;210&gt; 5405

&lt;211&gt; 1609

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5405

atattggcag aattggaagc aaatgtacct ggagcgcagg tacttggttaa tcaaataatg  
60  
cctggatttc ttaatatgaa gataaagttt gtgtgcgccc agtgtctgag aaacgggtcaa  
120  
gtcattgaac cagacaaaaa cagaaaatat tgtagtgcac aagcaaggca ttcgtggacc  
180  
aaagaccggc gtgcgatgag agtgatgtct attgaacgta agaagtggat gaacatccgt  
240  
cctctcccca caaagaaaca aatgccttta cagtttgatc tgtgcaacca tattgcttct  
300  
gggaaaaaat gtcaatatgt gggaaaactgt tcctttgctc atagtcctga ggaaagagaa  
360  
gtttggactt acatgaagga gaatgggata caagatatgg agcaatttta cgaactatgg  
420  
ctcaagagtc aaaaaaatga aaaaagtga gacatagcca gtcagtcaaa caaggaaaat  
480  
ggaaaacaaa ttcacatgcc aacagattat gctgaagtta cagtggactt tcaactgctgg  
540  
atgtgtggga aaaactgcaa cagtgagaag cagtggcagg gccacatctc ctccgagaag  
600  
caciaagaga aggttttcca caccgaggac gaccagtact gctggcagca ccgcttccca  
660  
acaggctatt tcagtatttg tgataggtat atgaatggca cctgcccaga aggaaacagc  
720  
tgtaaatattg cacatggaaa tgccgaactt catgaatggg aagaaagaag agatgcccta  
780  
aagatgaagc tcaacaaagc acgaaaagat cacttaattg gcccacaaatga taatgacttt  
840  
ggaaaatata gttttttgtt taaagattta aactaatatg ctggctttta tgtatgatac  
900  
ctaatacagag cattgaccag aaaaattgaa agtgttctga ggcacatagc agaggagctg  
960  
cagatttcct gcttgtattg gcgtatatcg ttcctcctga gcagcaaccc acagtaggta  
1020  
ggaaaatggg ctgtttcaca ggcctggcca cgctctcacg gaaccactgg catcagatgg  
1080  
tgaagtgact gctaccgggt tgccatctgt tgaacagact tttggatgaa gtgtgttggg  
1140  
gaagaggata aggttatatc taggacaact ctttgagttg gtccttcata taagaatcgt  
1200  
gacggtaaga gaataaacac ttgtactggg atcagaatac atgatggatg aaattcttta  
1260  
catgttttag cagaatgaat ttgtttaata taataaagtt tgctacttat ctgtatgtag  
1320  
gttgctaaaa aggattttct taactcagat ttttaagccaa ataaccattt aacactagta  
1380  
tttgttaaat ggggtatttt tctgtatttg tatgtttcac tataataagg gaattaagga  
1440  
taatgtgcat tgagaatatt ttgaaaaata attgactcaa attttatttc ttggtctttt  
1500  
gctgtttaaa tgatgatttt gaaagattaa acctgtactg ttggtattgt gttagtgtat  
1560  
ggaccaatac tgctgtaat aaagatttta tatataaaaa aaaaaaaaaa  
1609

<210> 5406  
<211> 291  
<212> PRT  
<213> Homo sapiens

<400> 5406  
Ile Leu Ala Glu Leu Glu Ala Asn Val Pro Gly Ala Gln Val Leu Gly  
1 5 10 15  
Asn Gln Ile Met Pro Gly Phe Leu Asn Met Lys Ile Lys Phe Val Cys  
20 25 30  
Ala Gln Cys Leu Arg Asn Gly Gln Val Ile Glu Pro Asp Lys Asn Arg  
35 40 45  
Lys Tyr Cys Ser Ala Lys Ala Arg His Ser Trp Thr Lys Asp Arg Arg  
50 55 60  
Ala Met Arg Val Met Ser Ile Glu Arg Lys Lys Trp Met Asn Ile Arg  
65 70 75 80  
Pro Leu Pro Thr Lys Lys Gln Met Pro Leu Gln Phe Asp Leu Cys Asn  
85 90 95  
His Ile Ala Ser Gly Lys Lys Cys Gln Tyr Val Gly Asn Cys Ser Phe  
100 105 110  
Ala His Ser Pro Glu Glu Arg Glu Val Trp Thr Tyr Met Lys Glu Asn  
115 120 125  
Gly Ile Gln Asp Met Glu Gln Phe Tyr Glu Leu Trp Leu Lys Ser Gln  
130 135 140  
Lys Asn Glu Lys Ser Glu Asp Ile Ala Ser Gln Ser Asn Lys Glu Asn  
145 150 155 160  
Gly Lys Gln Ile His Met Pro Thr Asp Tyr Ala Glu Val Thr Val Asp  
165 170 175  
Phe His Cys Trp Met Cys Gly Lys Asn Cys Asn Ser Glu Lys Gln Trp  
180 185 190  
Gln Gly His Ile Ser Ser Glu Lys His Lys Glu Lys Val Phe His Thr  
195 200 205  
Glu Asp Asp Gln Tyr Cys Trp Gln His Arg Phe Pro Thr Gly Tyr Phe  
210 215 220  
Ser Ile Cys Asp Arg Tyr Met Asn Gly Thr Cys Pro Glu Gly Asn Ser  
225 230 235 240  
Cys Lys Phe Ala His Gly Asn Ala Glu Leu His Glu Trp Glu Glu Arg  
245 250 255  
Arg Asp Ala Leu Lys Met Lys Leu Asn Lys Ala Arg Lys Asp His Leu  
260 265 270  
Ile Gly Pro Asn Asp Asn Asp Phe Gly Lys Tyr Ser Phe Leu Phe Lys  
275 280 285  
Asp Leu Asn  
290

<210> 5407  
<211> 2010  
<212> DNA  
<213> Homo sapiens

<400> 5407  
ataaaaagggga gaggagcgaa catggcagcg cgttggcggt tttggtgtgt ctctgtgacc  
60

atggtggtgg cgctgctcat cgtttgcgac gttccctcag cctctgcca aagaaagaag  
120  
gagatggtgt tatctgaaaa ggtagtcag ctgatggaat ggactaaca aagacctgta  
180  
ataagaatga atggagacaa gttccgtcgc cttgtgaaag cccaccgag aaattactcc  
240  
gttatcgtca tgttcactgc tctccaactg catagacagt gtgtcgtttg caagcaagct  
300  
gatgaagaat tccagatcct ggcaaactcc tggcgatact ccagtgcatt caccaacagg  
360  
atattttttg ccatggtgga ttttgatgaa ggctctgatg tatttcagat gctaaacatg  
420  
aattcagctc caactttcat caactttcct gcaaaaggga aacccaaacg gggtgataca  
480  
tatgagttac aggtgcgggg tttttcagct gagcagattg cccggtggat cgccgacaga  
540  
actgatgtca atattagagt gattagacct ccaaattatg ctgggtccct tatgttgga  
600  
ttgcttttg ctgttattgg tggacttggt tatcttcgaa gaagtaatat ggaatttctc  
660  
tttaataaaa ctggatgggc ttttgagct ttgtgttttg tgcttgctat gacatctggt  
720  
caaagtggga accatataag aggaccacca tatgccata agaatcccca cacgggacat  
780  
gtgaattata tccatggaag cagtcaagcc cagtttgtag ctgaaacaca cattgttctt  
840  
ctgtttaatg gtggagttac cttaggaatg gtgcttttat gtgaagctgc tacctctgac  
900  
atggatattg gaaagcgaaa gataatgtgt gtggctggta ttggacttgt tgtattatc  
960  
ttcagttgga tgctctctat ttttagatct aaatatcatg gctaccata cagctttctg  
1020  
atgagttaaa aagggtcccag agatatatag aactggagt actggaaatt gaaaaacgaa  
1080  
aatcgtgtgt gtttgaag aagaatgcaa cttgtatatt ttgtattacc tcttttttc  
1140  
aagtgattta aatagttaat catttaacca aagaagatgt gtagtgcctt aacaagcaat  
1200  
cctctgtcaa aatctgaggt atttgaaaat aattatcctc ttaaccttct cttcccagtg  
1260  
aactttatgg aacatttaat ttagtacaat taagtatatt ataaagatac tatgactgcc  
1320  
acctgccatt taccttctaa taacctgcc atgtgggttg cagaaagaga tggatatagt  
1380  
agcctcagaa gaaatatttt atgtgggttt tttgttttc gttactagat ttcattggtg  
1440  
aggggatatg gttgacctt tactttttta tggagcagcc agtttttggt aattactcac  
1500  
ttgtaaattg tgagattctg aattccttac ctgctattct tgtacttgct tcaggccaaa  
1560  
tctatgctgt ggttcttatg agacttgat gaagatgcc tgatttgat agattgacca  
1620  
cgggaatact actgcatgt aatctgtata gttccagata atttgtcatg aacattgaca  
1680

gaatgacaat tttttgtatt tgctttttct ccctttaaga gcacattctt ctgtaaggag  
 1740  
 aaaggcagca ttctggctaa aatgtgtaga aggttaattta ctacacttat aaaatagtgt  
 1800  
 gacttttctg aaaattttga attagctttc atatgaagtg ccttaagtag actcttcatt  
 1860  
 tacttttctg gtaatggttt aaatatcatt tgttatgcat ttttaagata cagttcagaa  
 1920  
 tgacacattg tagtggcaaa gataaccaaa tgtctggctg tttgcttttt gaccatatca  
 1980  
 ataaactttt acaatctaaa aaaaaaaaaa  
 2010

<210> 5408

<211> 335

<212> PRT

<213> Homo sapiens

<400> 5408

Met	Ala	Ala	Arg	Trp	Arg	Phe	Trp	Cys	Val	Ser	Val	Thr	Met	Val	Val
1			5					10						15	
Ala	Leu	Leu	Ile	Val	Cys	Asp	Val	Pro	Ser	Ala	Ser	Ala	Gln	Arg	Lys
		20						25					30		
Lys	Glu	Met	Val	Leu	Ser	Glu	Lys	Val	Ser	Gln	Leu	Met	Glu	Trp	Thr
	35					40						45			
Asn	Lys	Arg	Pro	Val	Ile	Arg	Met	Asn	Gly	Asp	Lys	Phe	Arg	Arg	Leu
	50				55					60					
Val	Lys	Ala	Pro	Pro	Arg	Asn	Tyr	Ser	Val	Ile	Val	Met	Phe	Thr	Ala
65				70					75					80	
Leu	Gln	Leu	His	Arg	Gln	Cys	Val	Val	Cys	Lys	Gln	Ala	Asp	Glu	Glu
			85					90					95		
Phe	Gln	Ile	Leu	Ala	Asn	Ser	Trp	Arg	Tyr	Ser	Ser	Ala	Phe	Thr	Asn
		100						105					110		
Arg	Ile	Phe	Phe	Ala	Met	Val	Asp	Phe	Asp	Glu	Gly	Ser	Asp	Val	Phe
	115						120					125			
Gln	Met	Leu	Asn	Met	Asn	Ser	Ala	Pro	Thr	Phe	Ile	Asn	Phe	Pro	Ala
	130					135					140				
Lys	Gly	Lys	Pro	Lys	Arg	Gly	Asp	Thr	Tyr	Glu	Leu	Gln	Val	Arg	Gly
145				150						155				160	
Phe	Ser	Ala	Glu	Gln	Ile	Ala	Arg	Trp	Ile	Ala	Asp	Arg	Thr	Asp	Val
			165					170					175		
Asn	Ile	Arg	Val	Ile	Arg	Pro	Pro	Asn	Tyr	Ala	Gly	Pro	Leu	Met	Leu
		180						185					190		
Gly	Leu	Leu	Leu	Ala	Val	Ile	Gly	Gly	Leu	Val	Tyr	Leu	Arg	Arg	Ser
	195						200					205			
Asn	Met	Glu	Phe	Leu	Phe	Asn	Lys	Thr	Gly	Trp	Ala	Phe	Ala	Ala	Leu
	210					215					220				
Cys	Phe	Val	Leu	Ala	Met	Thr	Ser	Gly	Gln	Met	Trp	Asn	His	Ile	Arg
225				230						235				240	
Gly	Pro	Pro	Tyr	Ala	His	Lys	Asn	Pro	His	Thr	Gly	His	Val	Asn	Tyr
			245					250					255		
Ile	His	Gly	Ser	Gln	Ala	Gln	Phe	Val	Ala	Glu	Thr	His	Ile	Val	
	260						265					270			
Leu	Leu	Phe	Asn	Gly	Gly	Val	Thr	Leu	Gly	Met	Val	Leu	Leu	Cys	Glu

	275		280		285
Ala	Ala Thr Ser Asp Met Asp Ile Gly Lys Arg Lys Ile Met Cys Val				
	290		295		300
Ala	Gly Ile Gly Leu Val Val Leu Phe Phe Ser Trp Met Leu Ser Ile				
305		310		315	320
Phe	Arg Ser Lys Tyr His Gly Tyr Pro Tyr Ser Phe Leu Met Ser				
	325		330		335

<210> 5409  
 <211> 2019  
 <212> DNA  
 <213> Homo sapiens

<400> 5409  
 ttttgaagcc tcagtcataa atttaataca ttctaggttg aatgctaaga aaagtttttaa  
 60  
 ttgtgcaa at gtggtacata acatttcaaa tataagtggga aggatcatca gtagtggtat  
 120  
 caaaatgcat aatacagaaa ctttttaaga aaggataaaa aattacactc aggacccata  
 180  
 actcttcttc attataagca tatgtagtga ttcattcatg cagggttttta tatgtagata  
 240  
 ggattttttt ttccttttca agaattccat tgtagccatg agatgaaaaa tgtattatgg  
 300  
 taatgggtata gctttcttct attttgcttt tagtggttagg tttgctaaaa gcttatttaa  
 360  
 aattcccaac tgacataatg tgttttcaat aaggaggacg ctgccgtgtc caataccctt  
 420  
 cccctgtcat tgttcggtac catatctcct ggcttcttc tacatgggtc acttagttaa  
 480  
 gagggaggcc aaggaggttc cgatttcagg cagtgtgtgg cagggttact gtcctagcaa  
 540  
 cctggctact cctcactgtg aacgtttctc ataggtgtca tatggcagga tgaaaaacat  
 600  
 atttgcctcc cagtgaaga tggcacaggc ttttgcccag ccagggtggc aagagaacag  
 660  
 aactcttaac cccttgctcg acagggttga gttcaagggg ttggatgtc caagcagagg  
 720  
 gccaaacct gatttatgaa gcatgctagg tcaacagcca gtcagaccac tcccacaaag  
 780  
 gctgccacaa aaactcccag ggaactgaga aaaatgttca ggtggcaga actctgtggc  
 840  
 ctttctgct ctttgagaa gtgttcaaag tagagaatat ccccagccc caccagtg  
 900  
 catgggacca aggcctttcc atcctggtaa tcataagttt taggggaatc agctgccctg  
 960  
 ggctgcccag ggcattcacat ccacagaagc agaagagagg agtcctccat agaagccatg  
 1020  
 gaggagccgg agattgacac gcagggtggaa gtatctgct cccacctct accctccccg  
 1080  
 cagcctatag tctagcacag gcctggagtg cgggagcaac tgctacaatg ttcagttcaa  
 1140  
 tcagataaat tggttgggtg tctcttcaga ttccagaaca cttggaaatg gtaattctgc  
 1200

caaaagaggc tctgtcagag atgatctggg tgacagattg cagttaaaaa catcatctat  
 1260  
 tgaacctctg gaagttacac tgaactttcg gtcagagaaa ctgctccttc ggattaaagg  
 1320  
 ctcactcatt tttccagaa ataacttaat cgtctccttc ttttctggac ttgtacttga  
 1380  
 caaattcaga acttttccat ttacttttac aacggaatta ctgagcccaa accaatagaa  
 1440  
 gaaatcaaat aatgcatcag ctttgaattc atatgcaaag cttaaatttt ctccattaac  
 1500  
 cacttcattt cctgggggga agaaattctt cactgcctct tgaaaatcaa actgaaagag  
 1560  
 agaggaacat tgcattgact gaagccggta actttctcca atcactgagg agatgaccat  
 1620  
 gtccatccct tgctctatct gtcttcttat cttgggggtgc ctcgtgttta caagaaacgc  
 1680  
 gtacgtcctt tcttttgagg tgtctttttt ggtctgtaca ttaataaaga acaacattgg  
 1740  
 tttgctcaat atagtttccc tgtagtcttt ataatcacag tagttggtca gttccacata  
 1800  
 cctcttgatg tagctgctga ggcggtagag ctgcccgtcg aggcgcacga ggccgtcacc  
 1860  
 gaagacgttg aagccccccc gcgcgcgcgc cggctccccg ggcccggcca ccacgagctg  
 1920  
 gtcgccgctc agctggaagg caccgggctg caggcgcagc agctgagcca gcggcagcag  
 1980  
 ggccagctcg cagtcgcagg tccacaggct gcgaagctt  
 2019

<210> 5410

<211> 198

<212> PRT

<213> Homo sapiens

<400> 5410

Met	Leu	Phe	Phe	Ile	Asn	Val	Gln	Thr	Lys	Lys	Asp	Thr	Ser	Lys	Glu
1				5					10					15	
Arg	Thr	Tyr	Ala	Phe	Leu	Val	Asn	Thr	Arg	His	Pro	Lys	Ile	Arg	Arg
			20					25					30		
Gln	Ile	Glu	Gln	Gly	Met	Asp	Met	Val	Ile	Ser	Ser	Val	Ile	Gly	Glu
		35				40						45			
Ser	Tyr	Arg	Leu	Gln	Ser	Met	Gln	Cys	Ser	Ser	Leu	Phe	Gln	Phe	Asp
	50				55						60				
Phe	Gln	Glu	Ala	Val	Lys	Asn	Phe	Phe	Pro	Pro	Gly	Asn	Glu	Val	Val
65				70					75					80	
Asn	Gly	Glu	Asn	Leu	Ser	Phe	Ala	Tyr	Glu	Phe	Lys	Ala	Asp	Ala	Leu
			85					90					95		
Phe	Asp	Phe	Phe	Tyr	Trp	Phe	Gly	Leu	Ser	Asn	Ser	Val	Val	Lys	Val
			100				105					110			
Asn	Gly	Lys	Val	Leu	Asn	Leu	Ser	Ser	Thr	Ser	Pro	Glu	Lys	Lys	Glu
	115					120					125				
Thr	Ile	Lys	Leu	Phe	Leu	Glu	Lys	Met	Ser	Glu	Pro	Leu	Ile	Arg	Arg
	130				135					140					
Ser	Ser	Phe	Ser	Asp	Arg	Lys	Phe	Ser	Val	Thr	Ser	Arg	Gly	Ser	Ile

145		150		155		160									
Asp	Asp	Val	Phe	Asn	Cys	Asn	Leu	Ser	Pro	Arg	Ser	Ser	Leu	Thr	Glu
		165		170		175									
Pro	Leu	Leu	Ala	Glu	Leu	Pro	Phe	Pro	Ser	Val	Leu	Glu	Ser	Glu	Glu
		180		185		190									
Thr	Pro	Asn	Gln	Phe	Ile										
		195													

<210> 5411  
 <211> 2802  
 <212> DNA  
 <213> Homo sapiens

<400> 5411  
 nccaggtaaa tctgaggaac ttccccaagc ctttatttgc acccggtaaa tccaataata  
 60  
 ccaattttga ttttaaattg gaggggggtc cttgcaggcc ccacatgaga ggggtggccct  
 120  
 tgaagaattc cttgggggtac ccacaggctt accagtttgg aaactcgcca ccccgagcag  
 180  
 aaggcagccc ggtattttgt gttatacaaa ccgcccccta aagacaacat tcccgcccta  
 240  
 gtggaggagt acctggaacg cgccaccttc gtagccaatg acctcgactg gctcctggcc  
 300  
 ttgcctcacg ataaattctg gtgccagggtg atctttgacg agactctaca gaagtgcctg  
 360  
 gactcctacc tgcgctatgt ccccgcaaa ttcgacgagg ggggtggcctc agcccctgag  
 420  
 gttgttgaca tgcagaagcg cctccatcga agtggttttc tcaccttctt ccgcatgtcc  
 480  
 actcacaagg aatccaaaga tcacttcatt tccccttctg cgtttgagga aatcctctac  
 540  
 aataacttcc tctttgacat tccaaagatc ctggacctct gcgtgctctt tggaaaaggc  
 600  
 aactcaccac tgctccagaa gatgatagga aacatcttta cacagcagcc aagttactac  
 660  
 agtgacctgg atgaaaccct gcctaccatc cttcaggtct tcagcaatat cctccagcac  
 720  
 tgtggtttgc aaggggacgg ggccaatacc acacccaga agcttgagga gaggggcccga  
 780  
 ttgaccccca gtgacatgcc tctcctggaa ttaaaggaca ttgttctcta cctttgtgat  
 840  
 acctgcacca cactttgggc ctttctggat atcttccctt tggcttgcca gaccttccag  
 900  
 aagcacgact tttgttacag actagcttcc ttctacgaag cagcaattcc cgaaatggag  
 960  
 tctgcaatta agaagaggag gcttgaagat agcaagcttc ttggtgacct gtggcagagg  
 1020  
 ctctcccatt ccaggaagaa gctaattggag attttccaca tcactctgaa ccagatctgc  
 1080  
 ctccttccca tcctagaaag cagctgtgac aacattcagg gcttcatcga agagttcctt  
 1140  
 cagatcttca gctccttgct gcaggagaag aggttcctcc gggactatga tgcactcttc  
 1200



cccgtagccg aagacatcag cttgctgcag caggcctcat cagtcttgga cgagacgcgg  
1260  
actgcctaca tcctccaggc agtcgagagt gcatgggaag gggtaggacag acggaaagcc  
1320  
acagatgcta aagacccatc ggtgattgag gaggcctaag gggagcctaa cggggtcacg  
1380  
gtgacagcag aggcagtcag tcaagcatca tcacatccgg agaactcgga ggaagaggag  
1440  
tgcaggggag cagccgcggc tgtgggcccct gccatgtgtg gggtaggaact ggactctctc  
1500  
atctcccaag tgaaggacct gctgccagac cttggtgagg gcttcatcct ggctgcctg  
1560  
gagtactacc actacgaccc agagcaggtg atcaacaata tcctggagga ggggctggcc  
1620  
cccaccctca gccagctgga ccgcaacctc gacagagaaa tgaaaccaga ccctacaccc  
1680  
ctgctgacgt ctgcccacaa cgtcttccag aatgacgagt ttgatgtgtt cagcagggac  
1740  
tcagtagacc tgagccgggt gcacaagggc aagagcacca ggaaggagga aaacacgcgg  
1800  
agtttgctga acgacaagcg tgcagtggcg gcacagcggc agcgctacga gcagtacagc  
1860  
gtggtaggtg aggaggtgcc actgcagcca ggcgagagcc tgccctacca cagtgtctac  
1920  
tacgaggatg agtacgatga cacatacgat ggcaaccagg tgggcgcca tgatgcagac  
1980  
tctatgacga gctcatcagc cgcaggccat tcaccatccc aggtgctgag aaccaaagtg  
2040  
cctagagaag ggcaggagga ggatgacgac gatgaggaag acgatgctga cgaggaggct  
2100  
ccaagcccg accattttgt tcaggacctc gcagtgtgta gagagaaggc agaagccagg  
2160  
cgcatggcct ttctcgccaa gaaagggtag cggcatgaca gctcaacagc agtggccggc  
2220  
agcccccgag gccatgggca gagccgcgag acaaccaggc aacgcaggaa gaaggaagcc  
2280  
aacaaggcga caagagccaa ccacaaccgg agaaccatgg ccgaccgcaa gaggagcaaa  
2340  
ggcatgatcc catcctgaga cctgggtgcag ggccagtggg gaggcagcgg caccagactc  
2400  
accaggccgc gctcccatcg cctggggcct cctcactagg ggccccaagt tcaactcaac  
2460  
ccctcaacag cctcagcttt gcagcccctg agaaggccgc ctctcatcta ccagccagcc  
2520  
atgagcgctt tcctgcagaa cacacagtgc cttatgccac agccgaagaa tccgtggggc  
2580  
cggcaagcag gcaccttccc ccagctgcgc tagcgggaaa gagatgggga tggagtccca  
2640  
aggcaagcgc cccaaacctc gggccacaag acaccacttc ccctttaccc tggacagcag  
2700  
gaaacctgta tattcaaaaa cacaaaaagt cctgctaata aaatttttga ccctttcaaa  
2760  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
2802

<210> 5412  
 <211> 642  
 <212> PRT  
 <213> Homo sapiens

<400> 5412

```

Met Gln Lys Arg Leu His Arg Ser Val Phe Leu Thr Phe Leu Arg Met
 1          5          10          15
Ser Thr His Lys Glu Ser Lys Asp His Phe Ile Ser Pro Ser Ala Phe
 20          25          30
Gly Glu Ile Leu Tyr Asn Asn Phe Leu Phe Asp Ile Pro Lys Ile Leu
 35          40          45
Asp Leu Cys Val Leu Phe Gly Lys Gly Asn Ser Pro Leu Leu Gln Lys
 50          55          60
Met Ile Gly Asn Ile Phe Thr Gln Gln Pro Ser Tyr Tyr Ser Asp Leu
 65          70          75          80
Asp Glu Thr Leu Pro Thr Ile Leu Gln Val Phe Ser Asn Ile Leu Gln
 85          90          95
His Cys Gly Leu Gln Gly Asp Gly Ala Asn Thr Thr Pro Gln Lys Leu
100          105          110
Glu Glu Arg Gly Arg Leu Thr Pro Ser Asp Met Pro Leu Leu Glu Leu
115          120          125
Lys Asp Ile Val Leu Tyr Leu Cys Asp Thr Cys Thr Thr Leu Trp Ala
130          135          140
Phe Leu Asp Ile Phe Pro Leu Ala Cys Gln Thr Phe Gln Lys His Asp
145          150          155          160
Phe Cys Tyr Arg Leu Ala Ser Phe Tyr Glu Ala Ala Ile Pro Glu Met
165          170          175
Glu Ser Ala Ile Lys Lys Arg Arg Leu Glu Asp Ser Lys Leu Leu Gly
180          185          190
Asp Leu Trp Gln Arg Leu Ser His Ser Arg Lys Lys Leu Met Glu Ile
195          200          205
Phe His Ile Ile Leu Asn Gln Ile Cys Leu Leu Pro Ile Leu Glu Ser
210          215          220
Ser Cys Asp Asn Ile Gln Gly Phe Ile Glu Glu Phe Leu Gln Ile Phe
225          230          235          240
Ser Ser Leu Leu Gln Glu Lys Arg Phe Leu Arg Asp Tyr Asp Ala Leu
245          250          255
Phe Pro Val Ala Glu Asp Ile Ser Leu Leu Gln Gln Ala Ser Ser Val
260          265          270
Leu Asp Glu Thr Arg Thr Ala Tyr Ile Leu Gln Ala Val Glu Ser Ala
275          280          285
Trp Glu Gly Val Asp Arg Arg Lys Ala Thr Asp Ala Lys Asp Pro Ser
290          295          300
Val Ile Glu Glu Pro Asn Gly Glu Pro Asn Gly Val Thr Val Thr Ala
305          310          315          320
Glu Ala Val Ser Gln Ala Ser Ser His Pro Glu Asn Ser Glu Glu Glu
325          330          335
Glu Cys Met Gly Ala Ala Ala Ala Val Gly Pro Ala Met Cys Gly Val
340          345          350
Glu Leu Asp Ser Leu Ile Ser Gln Val Lys Asp Leu Leu Pro Asp Leu
355          360          365
Gly Glu Gly Phe Ile Leu Ala Cys Leu Glu Tyr Tyr His Tyr Asp Pro

```

370	375	380
Glu Gln Val Ile Asn Asn Ile Leu Glu Glu Arg Leu Ala Pro Thr Leu		
385	390	395
Ser Gln Leu Asp Arg Asn Leu Asp Arg Glu Met Lys Pro Asp Pro Thr		400
	405	410
Pro Leu Leu Thr Ser Arg His Asn Val Phe Gln Asn Asp Glu Phe Asp		415
	420	425
Val Phe Ser Arg Asp Ser Val Asp Leu Ser Arg Val His Lys Gly Lys		430
	435	440
Ser Thr Arg Lys Glu Glu Asn Thr Arg Ser Leu Leu Asn Asp Lys Arg		445
	450	455
Ala Val Ala Ala Gln Arg Gln Arg Tyr Glu Gln Tyr Ser Val Val Val		460
465	470	475
Glu Glu Val Pro Leu Gln Pro Gly Glu Ser Leu Pro Tyr His Ser Val		480
	485	490
Tyr Tyr Glu Asp Glu Tyr Asp Asp Thr Tyr Asp Gly Asn Gln Val Gly		495
	500	505
Ala Asn Asp Ala Asp Ser Met Thr Ser Ser Ser Ala Ala Gly His Ser		510
	515	520
Pro Ser Gln Val Leu Arg Thr Lys Val Pro Arg Glu Gly Gln Glu Glu		525
	530	535
Asp Asp Asp Asp Glu Glu Asp Asp Ala Asp Glu Glu Ala Pro Lys Pro		540
545	550	555
Asp His Phe Val Gln Asp Pro Ala Val Leu Arg Glu Lys Ala Glu Ala		560
	565	570
Arg Arg Met Ala Phe Leu Ala Lys Lys Gly Tyr Arg His Asp Ser Ser		575
	580	585
Thr Ala Val Ala Gly Ser Pro Arg Gly His Gly Gln Ser Arg Glu Thr		590
	595	600
Thr Gln Glu Arg Arg Lys Lys Glu Ala Asn Lys Ala Thr Arg Ala Asn		605
	610	615
His Asn Arg Arg Thr Met Ala Asp Arg Lys Arg Ser Lys Gly Met Ile		620
625	630	635
Pro Ser		640

&lt;210&gt; 5413

&lt;211&gt; 1677

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5413

agagatgggt gtgtaatgaa aattacaagg tcgttgaaca aggttagtag tgtcttgcct  
60

ttttattctg tcatctcaaa cttcataaac agtcatacgt tctttgaaac gtagatttaa  
120

tgtgtgcagt catttataaa tcaatgacat ttctcttttt tgtcataaaa ctgtatactg  
180

aagaaattaa cgaatgcaca gtttctaaag ctgttgacatt tgtctgtgga atcatagggt  
240

cccactaaga agaatttcag cattctggcc agaaatttga atacaattca agttgaagaa  
300

atgtctgcct gtaacattag catccagggt cccagcatat ataataagga gcctaaaaat  
360

ataataaatc ctcatgaaaa agttcaaag agtcaattt gtgcaaattc tcctataaag  
420  
gcacaacagg atcaattaca agtaaaaaac aatataaaag caagtcttca caatgtcaaa  
480  
agttccttac ctctttttta tactaagtcc tctacttctg tggggcagtt gcagtctcct  
540  
accttgaatt cacctatcta tatgcaaaag caaggaaaaa atgaacatct tgcatttaat  
600  
accaaactta aggttcaac agttggttca gaattggtac ttgtttctac caccgttcca  
660  
actgttcatc atgtttctga tttggaaatg agctctactc tggactgttt acctgtgttg  
720  
gctgattggg aggatgtggg tttactgcca gcatctcagc ctgaggaaaa cgtagactgt  
780  
acagttccca ttagtgactc agacttagag atttcattta attctggaga aagattaatg  
840  
gttttgaaag aattggaaat gtcaagtcac gaaaactttg gagacataga ggaaactcct  
900  
caaaaatctg agacttctaa gtctattgtg tacaagagtc ctcacactac tatttataat  
960  
gtaaaagaag ccaaagatcc aggttcagat atttctgcct ttaagttacc tgaacacaaa  
1020  
tcaagtacct tcaacagagt taatgccaat atgtctcatc ctttagtttt ggggaaacat  
1080  
cctcttcttt caggtggtac caaaaggaat ccatgcagtc cccaagcttt cccaccagca  
1140  
aaaaaacaac ccttcactat tcatgaagaa aagcctacat catctgattg ctccccagta  
1200  
agaagttctt cctggaggcg tctcccatct atattaactt ctacagttaa cctacaagag  
1260  
ccatggaaga gtgggaaaat gacacctcca ttatgcaagt gtggtcggag atctaagaga  
1320  
cttggtgttt ctaataatgg accgaacct ggaaaagtct tctattgttg ccctatcggg  
1380  
aaataccaag aaaacagaaa atgttggtgt tatttcaaag gggaacaaac acttcaaaag  
1440  
gaaagagcca acagcatggt tccatctcat tccacagggg gactcacttt tagttctcca  
1500  
gaaacaagcc atatttgtga cagaaattta agtatttcca ccaaaaattc tttgagactc  
1560  
aggccttcaa tgaggaattg ataacctttc atgtatgaat cctaattggt ccttgaattt  
1620  
ccaaacatga gtattctgat aacatcttac actattttat ttttatttta tatatta  
1677

&lt;210&gt; 5414

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5414

Met	Ser	Ala	Cys	Asn	Ile	Ser	Ile	Gln	Gly	Pro	Ser	Ile	Tyr	Asn	Lys
1				5				10						15	
Glu	Pro	Lys	Asn	Ile	Ile	Asn	Pro	His	Glu	Lys	Val	Gln	Met	Lys	Ser

	20		25		30										
Ile	Cys	Ala	Asn	Ser	Pro	Ile	Lys	Ala	Gln	Gln	Asp	Gln	Leu	Gln	Val
	35						40					45			
Lys	Asn	Asn	Ile	Lys	Ala	Ser	Leu	His	Asn	Val	Lys	Ser	Ser	Leu	Pro
	50						55					60			
Leu	Phe	Asn	Thr	Lys	Ser	Ser	Thr	Ser	Val	Gly	Gln	Leu	Gln	Ser	Pro
65					70					75					80
Thr	Leu	Asn	Ser	Pro	Ile	Tyr	Met	Gln	Lys	Gln	Gly	Lys	Asn	Glu	His
				85					90					95	
Leu	Ala	Phe	Asn	Thr	Lys	Ser	Lys	Ala	Ser	Thr	Val	Gly	Ser	Glu	Leu
			100					105					110		
Val	Leu	Val	Ser	Thr	Thr	Val	Pro	Thr	Val	His	His	Val	Ser	Asp	Leu
			115				120					125			
Glu	Met	Ser	Ser	Thr	Leu	Asp	Cys	Leu	Pro	Val	Leu	Ala	Asp	Trp	Glu
	130					135					140				
Asp	Val	Val	Leu	Leu	Pro	Ala	Ser	Gln	Pro	Glu	Glu	Asn	Val	Asp	Cys
145					150					155					160
Thr	Val	Pro	Ile	Ser	Asp	Ser	Asp	Leu	Glu	Ile	Ser	Phe	Asn	Ser	Gly
				165					170					175	
Glu	Arg	Leu	Met	Val	Leu	Lys	Glu	Leu	Glu	Met	Ser	Ser	His	Glu	Asn
			180				185						190		
Phe	Gly	Asp	Ile	Glu	Glu	Thr	Pro	Gln	Lys	Ser	Glu	Thr	Ser	Lys	Ser
	195					200						205			
Ile	Val	Tyr	Lys	Ser	Pro	His	Thr	Thr	Ile	Tyr	Asn	Val	Lys	Glu	Ala
	210					215					220				
Lys	Asp	Pro	Gly	Ser	Asp	Ile	Ser	Ala	Phe	Lys	Leu	Pro	Glu	His	Lys
225					230					235					240
Ser	Ser	Thr	Phe	Asn	Arg	Val	Asn	Ala	Asn	Met	Ser	His	Pro	Leu	Val
				245					250					255	
Leu	Gly	Lys	His	Pro	Leu	Leu	Ser	Gly	Gly	Thr	Lys	Arg	Asn	Pro	Cys
			260				265						270		
Ser	Pro	Gln	Ala	Phe	Pro	Pro	Ala	Lys	Lys	Gln	Pro	Phe	Thr	Ile	His
		275					280					285			
Glu	Glu	Lys	Pro	Thr	Ser	Ser	Asp	Cys	Ser	Pro	Val	Arg	Ser	Ser	Ser
	290					295					300				
Trp	Arg	Arg	Leu	Pro	Ser	Ile	Leu	Thr	Ser	Thr	Val	Asn	Leu	Gln	Glu
305					310					315					320
Pro	Trp	Lys	Ser	Gly	Lys	Met	Thr	Pro	Pro	Leu	Cys	Lys	Cys	Gly	Arg
				325					330					335	
Arg	Ser	Lys	Arg	Leu	Val	Val	Ser	Asn	Asn	Gly	Pro	Asn	His	Gly	Lys
			340					345					350		
Val	Phe	Tyr	Cys	Cys	Pro	Ile	Gly	Lys	Tyr	Gln	Glu	Asn	Arg	Lys	Cys
		355					360					365			
Cys	Gly	Tyr	Phe	Lys	Trp	Glu	Gln	Thr	Leu	Gln	Lys	Glu	Arg	Ala	Asn
	370					375					380				
Ser	Met	Val	Pro	Ser	His	Ser	Thr	Gly	Gly	Leu	Thr	Phe	Ser	Ser	Pro
385					390					395					400
Glu	Thr	Ser	His	Ile	Cys	Asp	Arg	Asn	Leu	Ser	Ile	Ser	Thr	Lys	Asn
				405					410					415	
Ser	Leu	Arg	Leu	Arg	Pro	Ser	Met	Arg	Asn						
			420					425							

&lt;210&gt; 5415

&lt;211&gt; 1493

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5415

ntcagcctta cagagactgg aaaagaagcc caaaccaagg cccagagag gtccccag  
60  
cccccttggg tccctgagcc tcagctggag gtgggggggtg cctgcagtgc gctggctcag  
120  
tctccttctg aaaagctgga tccagcttgt ttgaagccct tgagctgatc ttagatccgg  
180  
cgcaggagac caacgcctgc catgctgttc cggctctcag agcactcctc accagaggag  
240  
gaagcctccc cccaccagag agcctcagga gaggggcacc atctcaagtc gaagagaccc  
300  
aacccctgtg cctacacacc accttcgctg aaagctgtgc agcgcattgc tgagtctcac  
360  
ctgcagtcta tcagcaattt gaatgagaac caggcctcag aggaggagga tgagctgggg  
420  
gagcttcggg agctgggtta tccaagagag gaagatgagg aggaagagga ggatgatgaa  
480  
gaagaggaag aagaagagga cagccaggct gaagtcctga aggtcatcag gcagtctgct  
540  
gggcaaaaga caacctgtgg ccagggctctg gaagggccct gggagcgccc accccctctg  
600  
gatgagtccg agagagatgg aggtctctgag gaccaagtgg aagaccagc actaagtgag  
660  
cctggggagg aacctcagcg cccttcccc tctgagcctg gcacataggc acccagcctg  
720  
catctcccag gaggaagtgg aggggacatc gctgttcccc agaaaccac tctatcctca  
780  
ccctgttttg tgctcttccc ctgcctgct agggctgctg cttctgactt ctagaagact  
840  
aaggctggtc tgtgtttgct tgtttgcca cttttggctg ataccagag aacctgggca  
900  
cttgctgcct gatgcccacc cctgccagtc attcctccat tcaccagcg ggagggtggga  
960  
tgtgagacag cccacattgg aaaatccaga aaaccgggaa cagggatattg cccttcacaa  
1020  
ttctactccc cagatcctct cccctggaca caggagaccc acagggcagg accctaagat  
1080  
ctggggaaaag gaggtcctga gaaccttgag gtacccttag atccttttct acccactttc  
1140  
ctatggagga ttccaagtca ccacttctct caccggcttc taccagggtc caggactaag  
1200  
gcgtttttct ccatagcctc aacatttttg gaatcttccc ttaatcacc ttgctcctcc  
1260  
tgggtgcctg gaagatggac tggcagagac ctctttgttg cgttttgtgc tttgatgcca  
1320  
ggaatgccgc ctagtttatg tccccgggtg ggcacacagc ggggggcgcc aggttttcct  
1380  
tgtccccag ctgctctgcc cctttcccct tcttccctga ctccaggcct gaaccctcc  
1440  
cgtgctgtaa taaatctttg taaataaaaa aaaaaaaaaa aaaaaaaaaa aaa  
1493

<210> 5416  
 <211> 55  
 <212> PRT  
 <213> Homo sapiens

<400> 5416  
 Xaa Ser Leu Thr Glu Thr Gly Lys Glu Ala Gln Thr Lys Ala Pro Glu  
 1 5 10 15  
 Arg Ser Pro Arg Pro Leu Trp Phe Pro Glu Pro Gln Leu Glu Val Gly  
 20 25 30  
 Gly Ala Cys Ser Ala Leu Ala Gln Ser Pro Ser Glu Lys Leu Asp Pro  
 35 40 45  
 Ala Cys Leu Lys Pro Leu Ser  
 50 55

<210> 5417  
 <211> 2087  
 <212> DNA  
 <213> Homo sapiens

<400> 5417  
 tccacgcacc tgccatgtgc caggcactaa tccagatgcc ggggatatat ttgtaaacia  
 60  
 aacctaccac cctcatggat aaagaagggt gagagtata aaggagactg ttctagataa  
 120  
 catggtcaga gaagggtctt ctgaagaggt gacttttttag cagagacttg aaggagatga  
 180  
 gagaataagc catgccagca tctgagatga agagcattcc agacagaaag aacagcaagc  
 240  
 gcagaggccc tgaggtggcc catatctggc gtgttcaagg agtagccata ggaggccagg  
 300  
 atggctgcaa ttgatgagga aggagggaga gagataggag atgaagtcaa tatattggtg  
 360  
 aaggaacaga cacagttagg ggtcaagact ctcatgaggt tactcaagga accagagaaa  
 420  
 gaacgggact cagactcaga tttctccctt cttcagcaga ctgagggatg ccagcgaaga  
 480  
 gacaagcact tccgtcatgc agaaaacccc catcatcctc tcaaacctc cagcagagcg  
 540  
 gcccctctgg agaagcccat cgttctcatg aagccacggg aggaggggaa ggggcctgtg  
 600  
 gccgtgacag gtgcctctac ccctgagggc accgccccac caccctctgc agcccctgcg  
 660  
 ccaccaagg gggagaagga ggggcagaga cccacacagc ctgtgtacca gatccagaac  
 720  
 cggggcatgg gcactgccgc accagcagcc atggaccctg tcgtgggtca ggccaaacta  
 780  
 ctgccccag agcgcataaa gcacagcatc aagttggtgg atgaccagat gaattggtgt  
 840  
 gacagtacca tcgagtacct gttggatcag actgatgtgt tgggtggttg tgcctgggc  
 900  
 ctccagggga caggcaagtc catggtcatg tcattgttgt cagccaacac tccagaggag  
 960

gaccagagga cttatgtttt ccgggccag agcgctgaaa tgaaggaacg agggggcaac  
 1020  
 cagaccagtg gcatcgactt ctttattacc caagaacgga ttgttttcct ggacacacag  
 1080  
 cccatcctga gcccttctat cctagaccat ctcataata atgaccgcaa actgcctcca  
 1140  
 gagtacaacc ttccccacac ttacgttgaa atgcagtcac tccagattgc tgccttcctt  
 1200  
 ttcaagggtc gccatgtggt gattgtgtc caggactggt tcacagacct cagtctctac  
 1260  
 aggtctgtgg acctgggggt caagtgaag agcaacagcc actcaccaca aacccaagg  
 1320  
 ttctgcaga cagcagagat ggtgaagccc tccaccccat ccccagcca cgagtccagc  
 1380  
 agtcatcgg gctccgatga aggcaccgag tactaccccc acctagtctt cttgcagaac  
 1440  
 aaagctcgcc gagaggactt ctgtcctcgg aagctgcggc agatgcacct gatgattgac  
 1500  
 cagctcatgg ccactccca cctgcgttac aagggaactc tgtccatgtt acaatgcaat  
 1560  
 gtcttcccg ggcttccacc tgacttctc gactctgagg tcaacttatt cctggtagcc  
 1620  
 ttcattgaca gtgaagcaga gagtgaatac ccaccaagag caggacctgg ttccagccca  
 1680  
 ctcttctccc tgctgcctgg gtatcgtggc caccacagtt tccagtcctt ggtgagcaag  
 1740  
 ctccggagcc aagtgatgtc catggcccgg ccacagctgt cacacacgat cctcaccgag  
 1800  
 aagaactggt tccactacgc tgcccggatc tgggatgggg tgagaaagtc ctctgctctg  
 1860  
 gcagagtaca gccgcctgct ggcctgaggc caaggagagg aatgtcatgc aggggacctc  
 1920  
 ctgggtccgc agtgtactgc gagggagcac agatgtccat ccccgctgg ggtggagagc  
 1980  
 ggcagcaggc ctgatggatg agggatcgtg gcttcccggc ccagagacat gaggtgtcca  
 2040  
 gggccaggcc cccacccctc agttggggct gttccggggg tgactgt  
 2087

&lt;210&gt; 5418

&lt;211&gt; 528

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5418

Met	Ala	Ala	Ile	Asp	Glu	Glu	Gly	Gly	Arg	Glu	Ile	Gly	Asp	Glu	Val
1				5					10					15	
Asn	Ile	Leu	Val	Lys	Glu	Gln	Thr	Gln	Leu	Gly	Val	Lys	Thr	Leu	Met
			20					25					30		
Arg	Leu	Leu	Lys	Glu	Pro	Glu	Lys	Glu	Arg	Asp	Ser	Asp	Ser	Asp	Phe
			35				40				45				
Ser	Pro	Leu	Gln	Gln	Thr	Glu	Gly	Cys	Gln	Arg	Arg	Asp	Lys	His	Phe
	50					55				60					
Arg	His	Ala	Glu	Asn	Pro	His	His	Pro	Leu	Lys	Thr	Ser	Ser	Arg	Ala



4602

	500		505		510
Gly Val Arg Lys Ser Ser Ala Leu Ala Glu Tyr Ser Arg Leu Leu Ala					
515		520		525	

<210> 5419  
 <211> 989  
 <212> DNA  
 <213> Homo sapiens

<400> 5419  
 ttttcgtcca ggagtcggag gagcaagtcc aggtcccgtt cccgaaggcg ccaccagcgg  
 60  
 aagtacaggc gctactcgcg gtcatactcg cggagccggt cgcgatcccg cagccgccgt  
 120  
 taccgagaga ggcgctacgg gttcaccagg agatactacc ggtctccttc gcggtaccgg  
 180  
 tcccgggtccc gtagcaggtc gcgctctcgg ggaaggctcg actgcggaag ggcgtacgcg  
 240  
 atcgcgcggg gacagcgcta ctacggcttt ggtcgcacag tgtacccgga ggagcacagc  
 300  
 agatggaggg acagatccag gacgaggtcg cggagcagaa ccccttttcg cttaagtga  
 360  
 aaagatcgaa tggagctggt agaaatagca aaaaccaatg cagcgaaagc tctaggaaca  
 420  
 accaaccattg acttgccagc tagtctcaga actgttcctt cagccaaaga aacaagccgt  
 480  
 ggaataggtg tatcaagtaa tggtgcaaag cctgaaaaat catgaatgtg gtctgcagac  
 540  
 attgatgaag aaaatctggt gctgtcggaa aaggtaacag aagatggaac tcgaaatccc  
 600  
 aatgaaaaac ctaccagca aagaagcata gcttttagct ctaataattc tgtagcaaag  
 660  
 ccaatacaaa aatcagctaa agctgccaca gaagaggcat cttcaagatc accaaaaata  
 720  
 gatcagaaaa aaagtccata tggactgtgg atacctatct aaaagaagaa aactgatggc  
 780  
 taagtttgca tgaaaactgc actttattgc aagttagtgt ttctagcatt atcccatccc  
 840  
 tttgagccat tcaggggtac ttgtgcattt aaaaaccaac acaaaaagat gtaaatactt  
 900  
 aacactcaaa tattaacatt ttaggtttct cttgcagata tgagagatag cacagatgga  
 960  
 ccaaaggtta tgcacaggtg ggagtcttt  
 989

<210> 5420  
 <211> 174  
 <212> PRT  
 <213> Homo sapiens

<400> 5420  
 Phe Ser Ser Arg Ser Arg Arg Ser Lys Ser Arg Ser Arg Ser Arg Arg  
 1 5 10 15  
 Arg His Gln Arg Lys Tyr Arg Arg Tyr Ser Arg Ser Tyr Ser Arg Ser

20 25 30  
 Arg Ser Arg Ser Arg Ser Arg Arg Tyr Arg Glu Arg Arg Tyr Gly Phe  
 35 40 45  
 Thr Arg Arg Tyr Tyr Arg Ser Pro Ser Arg Tyr Arg Ser Arg Ser Arg  
 50 55 60  
 Ser Arg Ser Arg Ser Arg Gly Arg Ser Tyr Cys Gly Arg Ala Tyr Ala  
 65 70 75 80  
 Ile Ala Arg Gly Gln Arg Tyr Tyr Gly Phe Gly Arg Thr Val Tyr Pro  
 85 90 95  
 Glu Glu His Ser Arg Trp Arg Asp Arg Ser Arg Thr Arg Ser Arg Ser  
 100 105 110  
 Arg Thr Pro Phe Arg Leu Ser Glu Lys Asp Arg Met Glu Leu Leu Glu  
 115 120 125  
 Ile Ala Lys Thr Asn Ala Ala Lys Ala Leu Gly Thr Thr Asn Ile Asp  
 130 135 140  
 Leu Pro Ala Ser Leu Arg Thr Val Pro Ser Ala Lys Glu Thr Ser Arg  
 145 150 155 160  
 Gly Ile Gly Val Ser Ser Asn Gly Ala Lys Pro Glu Lys Ser  
 165 170

<210> 5421  
 <211> 1239  
 <212> DNA  
 <213> Homo sapiens

<400> 5421  
 nccagctgcc gctgtcgtct ttgcttcagc cgcagtcgcc actggctgcc tgaggtgctc  
 60  
 ttacagcctg ttccaagtgt ggcttaatcc gtctccacca ccagatcttt ctccgtggat  
 120  
 tcctctgcta agaccgctgc catgccagtg acggttaacc gcaccacat cacaaccacc  
 180  
 acgacgtcat ctgcggcct ggggtccccc atgatcgtgg ggccccctcg ggccctgaca  
 240  
 cagccccctgg gtctccttcg cctgctgcag ctggtgtcta cctgcgtggc cttctcgtg  
 300  
 gtggctagcg tgggcgcctg gacgggggtcc atgggcaact ggtccatgtt cacctggtgc  
 360  
 ttctgcttct ccgtgacct gatcctctc atcgtggagc tgtgcgggct ccaggcccgc  
 420  
 ttccccctgt cttggcgcaa ctccccatc accttcgct gctatgcggc cctcttctgc  
 480  
 ctctcggcct ccatcatcta cccaccacc tatgtccagt tcctgtccca cggccgttcg  
 540  
 cgggaccacg ccatcgccgc caccttcttc tcctgcatcg cgtgtgtggc ttacgccacc  
 600  
 gaagtggcct ggaccgggc ccggcccggc gagatcactg gctatatggc caccgtaccc  
 660  
 gggctgctga aggtgctgga gaccttcgtt gcctgcatca tcttcgcgtt catcagcgac  
 720  
 cccaacctgt accagcacca gccggccctg gagtgggtgc tggcggtgta cgccatctgc  
 780  
 ttcctcctag cggccatcgc catcctgctg aacctggggg agtgcaccaa cgtgctaccc  
 840

atcccccttcc ccagcttccct gtcggggctg gccttggtgc tgcctcctc tatgccaccg  
900  
cccttggttct ctggcccctc taccagttcg atgagaagta tggcggccag cctcggcgct  
960  
cgagagatgt aagctgcagc cgcagccatg cctactacgt gtgtgcctgg gaccgccgac  
1020  
tggctgtggc catcctgacg gccatcaacc tactggcgta tgtggctgac ctggtgcact  
1080  
ctgcccacct gggttttgc aaggtttaag actctcccaa gaggtcccg ttccctctcc  
1140  
aacctctttg ttcttggtgc ccgagtttcc tttatggagt acttctttcc cccgccttc  
1200  
gtctgttttc ctttctctgt ctccctccc ttcacgcgt  
1239

&lt;210&gt; 5422

&lt;211&gt; 276

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5422

Met	Pro	Val	Thr	Val	Thr	Arg	Thr	Thr	Ile	Thr	Thr	Thr	Thr	Thr	Ser
1				5					10					15	
Ser	Ser	Gly	Leu	Gly	Ser	Pro	Met	Ile	Val	Gly	Ser	Pro	Arg	Ala	Leu
			20					25					30		
Thr	Gln	Pro	Leu	Gly	Leu	Leu	Arg	Leu	Leu	Gln	Leu	Val	Ser	Thr	Cys
			35				40					45			
Val	Ala	Phe	Ser	Leu	Val	Ala	Ser	Val	Gly	Ala	Trp	Thr	Gly	Ser	Met
	50					55					60				
Gly	Asn	Trp	Ser	Met	Phe	Thr	Trp	Cys	Phe	Cys	Phe	Ser	Val	Thr	Leu
65				70					75					80	
Ile	Ile	Leu	Ile	Val	Glu	Leu	Cys	Gly	Leu	Gln	Ala	Arg	Phe	Pro	Leu
			85					90						95	
Ser	Trp	Arg	Asn	Phe	Pro	Ile	Thr	Phe	Ala	Cys	Tyr	Ala	Ala	Leu	Phe
			100					105						110	
Cys	Leu	Ser	Ala	Ser	Ile	Ile	Tyr	Pro	Thr	Thr	Tyr	Val	Gln	Phe	Leu
			115				120						125		
Ser	His	Gly	Arg	Ser	Arg	Asp	His	Ala	Ile	Ala	Ala	Thr	Phe	Phe	Ser
	130					135					140				
Cys	Ile	Ala	Cys	Val	Ala	Tyr	Ala	Thr	Glu	Val	Ala	Trp	Thr	Arg	Ala
145				150						155				160	
Arg	Pro	Gly	Glu	Ile	Thr	Gly	Tyr	Met	Ala	Thr	Val	Pro	Gly	Leu	Leu
			165					170						175	
Lys	Val	Leu	Glu	Thr	Phe	Val	Ala	Cys	Ile	Ile	Phe	Ala	Phe	Ile	Ser
			180				185							190	
Asp	Pro	Asn	Leu	Tyr	Gln	His	Gln	Pro	Ala	Leu	Glu	Trp	Cys	Val	Ala
		195				200						205			
Val	Tyr	Ala	Ile	Cys	Phe	Ile	Leu	Ala	Ala	Ile	Ala	Ile	Leu	Leu	Asn
	210					215						220			
Leu	Gly	Glu	Cys	Thr	Asn	Val	Leu	Pro	Ile	Pro	Phe	Pro	Ser	Phe	Leu
225				230						235				240	
Ser	Gly	Leu	Ala	Leu	Cys	Leu	Ser	Ser	Ser	Met	Pro	Pro	Pro	Leu	Phe
			245						250					255	
Ser	Gly	Pro	Ser	Thr	Ser	Ser	Met	Arg	Ser	Met	Ala	Ala	Ser	Leu	Gly

260 265 270  
Ala Arg Glu Met  
275

<210> 5423  
<211> 2427  
<212> DNA  
<213> Homo sapiens

<400> 5423  
nccgcggcctt tgcagagcag gatgaatgtg atagaccacg tgcgggacat ggcggccgcg  
60  
gggctgcact ccaacgtgcg gctcctcagc agcttggttac ttacaatgag taataacaac  
120  
cctgagttat tctccccacc tcagaagtac cagcttttgg tgtatcatgc agattctctc  
180  
tttcatgata aggaatatcg gaatgctgtg agtaagtata ccatggcttt acagcagaag  
240  
aaagcgctaa gtaaaacttc aaaagtgaga ctttcaactg gaaattctgc atctactcca  
300  
caaagtcagt gtcttccatc tgaaattgaa gtgaaatata aaatggctga atgttatata  
360  
atgctaaaaac aagataaaga tgccattgct atacttgatg ggatcccttc aagacaaaga  
420  
actccccaaaa taaacatgat gctggcaaac ctgtacaaga aggctgggtca ggagcgcct  
480  
tcagtcacca gctataagga ggtgctgagg cagtgcccat tagcccttga tgccattcta  
540  
ggcttggtgt ccctttctgt aaaaggggca gaggtggcat ccatgacaat gaatgtgatc  
600  
caaaccgtgc ctaacttga ctggctctct gtgtggatca aagcgtatgc ttttgtgcac  
660  
actggtgaca actcaagagc aatcagtacc atctgttcac tagagaaaaa atccttattg  
720  
cgagataacg tggacctatt gggaagcttg gcagatctgt acttcagagc tggagacaat  
780  
aaaaactctg tcctcaagtt tgaacaggca cagatggttg atccttatct gataaaagga  
840  
atggatgtat atggctacct actggcacga gaagggcggc tagaggatgt tgagaacctt  
900  
ggatgccgcc ttttcaatat ctctgatcag catgcagaac cgtgggtggt ttctggctgt  
960  
cacagcttct atagcaaacg ctactcccgg gccctctatt taggagccaa ggccattcag  
1020  
ctgaacagta atagtgttca agctctgcta cttaaggag cagcacttag gaacatgggc  
1080  
agagtccaag aagcaataat ccactttcgg gaggccatac ggctcgcacc ttgtcgctta  
1140  
gattgttatg aaggtcttat cgaatgttac ttagcctcca acagtattcg agaagcaatg  
1200  
gtaatggcta acaacgttta caaaactctg ggagcaaata cacagaccct taccctttta  
1260  
gccaccgttt gtcttgaaga cccagtga caggagaaag ccaaaacatt attagataaa  
1320

gccctgaccc aaaggccaga ttacattaag gctgtggtga aaaaagcaga actacttagc  
1380  
agagaacaga aatatgaaga tggaattgct ttgctgagga acgcactggc taatcagagt  
1440  
gactgtgtcc tgcacggat cctaggagat ttcctttag ctgtcaatga gtatcaggag  
1500  
gcaatggacc agtatagtat agcactaagt ttggaccca atgaccagaa gtctctagag  
1560  
gggatgcaga agatggagaa ggaggagagt cccacggatg ccactcagga ggaggatgtg  
1620  
gacgacatgg aagggagtgg ggaagaaggg gacctggagg gcagcgacag tgaggcggcc  
1680  
cagtgggctg accaggagca gtgggttcggc atgagtgagg gggcggcagc tccatggcgg  
1740  
cagtggcctg cctgtctctg agcacttccg tggactgaag gaaccgtagg agcctgctct  
1800  
cagaaggaca atgattcagc atgtgattgc agcaggggtc tctgccccct cgctcccaat  
1860  
tcctagtcgt gacttcattt ctaaaacaga gcctgaccaa ccttccatgt atctccatcc  
1920  
tcccctgctc cagccaggga ggactgaggg agtgccccga gaccacgca catgttgggg  
1980  
cttctgggccc aagagtactt tttatataac taatttctaa atccaaaagc tcaaggaata  
2040  
gacagtgttc tgtgacatgg attggtttga aggagttacc caccatccca gcacgataat  
2100  
gtcatctccc aagttggatg gcagcacgat ctggccctag ggagcttcct gttcccagaa  
2160  
gtcattgtcc tgggctatcc agatgtccct agtaaatctt gcttcttct gcaatgttag  
2220  
taatgcctta agctgacagt tgctattttg cagaacagtt ttcctctttg cttagctagt  
2280  
aacttgccctc tgagcctggg ctgatctgag aaacaggtgt gacaagagca tgaaccagag  
2340  
gtgcacctgg ggcagttccc taataaaact ggtttgtaca gtcatggtgt tggggtgatc  
2400  
agaatggaag cccttttcaa aataaaa  
2427

&lt;210&gt; 5424

&lt;211&gt; 570

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5424

Met	Ala	Ala	Ala	Gly	Leu	His	Ser	Asn	Val	Arg	Leu	Leu	Ser	Ser	Leu
1				5					10					15	
Leu	Leu	Thr	Met	Ser	Asn	Asn	Asn	Pro	Glu	Leu	Phe	Ser	Pro	Pro	Gln
			20					25					30		
Lys	Tyr	Gln	Leu	Leu	Val	Tyr	His	Ala	Asp	Ser	Leu	Phe	His	Asp	Lys
		35					40					45			
Glu	Tyr	Arg	Asn	Ala	Val	Ser	Lys	Tyr	Thr	Met	Ala	Leu	Gln	Gln	Lys
	50						55				60				
Lys	Ala	Leu	Ser	Lys	Thr	Ser	Lys	Val	Arg	Pro	Ser	Thr	Gly	Asn	Ser

65	70								75					80			
Ala	Ser	Thr	Pro	Gln	Ser	Gln	Cys	Leu	Pro	Ser	Glu	Ile	Glu	Val	Lys		
				85					90					95			
Tyr	Lys	Met	Ala	Glu	Cys	Tyr	Thr	Met	Leu	Lys	Gln	Asp	Lys	Asp	Ala		
				100					105					110			
Ile	Ala	Ile	Leu	Asp	Gly	Ile	Pro	Ser	Arg	Gln	Arg	Thr	Pro	Lys	Ile		
				115					120					125			
Asn	Met	Met	Leu	Ala	Asn	Leu	Tyr	Lys	Lys	Ala	Gly	Gln	Glu	Arg	Pro		
				130					135					140			
Ser	Val	Thr	Ser	Tyr	Lys	Glu	Val	Leu	Arg	Gln	Cys	Pro	Leu	Ala	Leu		
				145					150					155			
Asp	Ala	Ile	Leu	Gly	Leu	Leu	Ser	Leu	Ser	Val	Lys	Gly	Ala	Glu	Val		
				165					170					175			
Ala	Ser	Met	Thr	Met	Asn	Val	Ile	Gln	Thr	Val	Pro	Asn	Leu	Asp	Trp		
				180					185					190			
Leu	Ser	Val	Trp	Ile	Lys	Ala	Tyr	Ala	Phe	Val	His	Thr	Gly	Asp	Asn		
				195					200					205			
Ser	Arg	Ala	Ile	Ser	Thr	Ile	Cys	Ser	Leu	Glu	Lys	Lys	Ser	Leu	Leu		
				210					215					220			
Arg	Asp	Asn	Val	Asp	Leu	Leu	Gly	Ser	Leu	Ala	Asp	Leu	Tyr	Phe	Arg		
				225					230					235			
Ala	Gly	Asp	Asn	Lys	Asn	Ser	Val	Leu	Lys	Phe	Glu	Gln	Ala	Gln	Met		
				245					250					255			
Leu	Asp	Pro	Tyr	Leu	Ile	Lys	Gly	Met	Asp	Val	Tyr	Gly	Tyr	Leu	Leu		
				260					265					270			
Ala	Arg	Glu	Gly	Arg	Leu	Glu	Asp	Val	Glu	Asn	Leu	Gly	Cys	Arg	Leu		
				275					280					285			
Phe	Asn	Ile	Ser	Asp	Gln	His	Ala	Glu	Pro	Trp	Val	Val	Ser	Gly	Cys		
				290					295					300			
His	Ser	Phe	Tyr	Ser	Lys	Arg	Tyr	Ser	Arg	Ala	Leu	Tyr	Leu	Gly	Ala		
				305					310					315			
Lys	Ala	Ile	Gln	Leu	Asn	Ser	Asn	Ser	Val	Gln	Ala	Leu	Leu	Leu	Lys		
				325					330					335			
Gly	Ala	Ala	Leu	Arg	Asn	Met	Gly	Arg	Val	Gln	Glu	Ala	Ile	Ile	His		
				340					345					350			
Phe	Arg	Glu	Ala	Ile	Arg	Leu	Ala	Pro	Cys	Arg	Leu	Asp	Cys	Tyr	Glu		
				355					360					365			
Gly	Leu	Ile	Glu	Cys	Tyr	Leu	Ala	Ser	Asn	Ser	Ile	Arg	Glu	Ala	Met		
				370					375					380			
Val	Met	Ala	Asn	Asn	Val	Tyr	Lys	Thr	Leu	Gly	Ala	Asn	Ala	Gln	Thr		
				385					390					395			
Leu	Thr	Leu	Leu	Ala	Thr	Val	Cys	Leu	Glu	Asp	Pro	Val	Thr	Gln	Glu		
				405					410					415			
Lys	Ala	Lys	Thr	Leu	Leu	Asp	Lys	Ala	Leu	Thr	Gln	Arg	Pro	Asp	Tyr		
				420					425					430			
Ile	Lys	Ala	Val	Val	Lys	Lys	Ala	Glu	Leu	Leu	Ser	Arg	Glu	Gln	Lys		
				435					440					445			
Tyr	Glu	Asp	Gly	Ile	Ala	Leu	Leu	Arg	Asn	Ala	Leu	Ala	Asn	Gln	Ser		
				450					455					460			
Asp	Cys	Val	Leu	His	Arg	Ile	Leu	Gly	Asp	Phe	Leu	Val	Ala	Val	Asn		
				465					470					475			
Glu	Tyr																

	500		505		510
Glu Ser Pro Thr Asp Ala Thr Gln Glu Glu Asp Val Asp Asp Met Glu					
515		520		525	
Gly Ser Gly Glu Glu Gly Asp Leu Glu Gly Ser Asp Ser Glu Ala Ala					
530		535		540	
Gln Trp Ala Asp Gln Glu Gln Trp Phe Gly Met Ser Glu Gly Ala Ala					
545		550		555	560
Ala Pro Trp Pro Gln Trp Pro Ala Leu Leu					
565		570			

<210> 5425  
 <211> 639  
 <212> DNA  
 <213> Homo sapiens

<400> 5425  
 cggccgcca tgtgatcaaa cggtatacag cccaggcgcc agatgagctg tcctttgagg  
 60  
 tgaggctgtg gggaagcaga ttccagctgg gctccccaca cccctgctc cttctgaccc  
 120  
 ttctcttccc acccgccctc tcccaggtgg gagacattgt ctcggtgatc gacatgccac  
 180  
 ccacagagga tcggagctgg tggcggggca agcgaggctt ccaggctcggg ttcttcccca  
 240  
 gtgagtgtgt ggaactcttc acagagcggc caggctccggg cctgaaggcg gatgccgatg  
 300  
 gccccccatg tggcatcccg gctccccagg gtatctcgtc tctgacctca gctgtgccac  
 360  
 ggcctcgtgg gaagctggcc ggcctgctcc gcaccttcac gcgctccgc ccttctcggc  
 420  
 agcggctgcy gcagcgggga atcctgcgac agagggtgtt tggctgcgat cttggcgagc  
 480  
 acctcagcaa ctcaggccag gatgtgcccc gtgctgcgct gctgctccga gttcattgag  
 540  
 gccnacgggg tgggtgatgg gatctaccgg ctctcaggcg tgtcttccaa catccagagg  
 600  
 cttcggcacg agtttgacag tgagaggata ccggagctg  
 639

<210> 5426  
 <211> 98  
 <212> PRT  
 <213> Homo sapiens

<400> 5426  
 Pro Gln Leu Cys His Gly Leu Val Gly Ser Trp Pro Ala Cys Ser Ala  
 1 5 10 15  
 Pro Ser Cys Ala Pro Ala Leu Leu Gly Ser Gly Cys Gly Ser Gly Glu  
 20 25 30  
 Ser Cys Asp Arg Gly Cys Leu Ala Ala Ile Leu Ala Ser Thr Ser Ala  
 35 40 45  
 Thr Gln Ala Arg Met Cys Pro Val Leu Arg Cys Cys Ser Glu Phe Ile  
 50 55 60  
 Glu Ala Xaa Gly Val Val Asp Gly Ile Tyr Arg Leu Ser Gly Val Ser



65                      70                      75                      80  
Ser Asn Ile Gln Arg Leu Arg His Glu Phe Asp Ser Glu Arg Ile Pro  
                         85                      90                      95  
Glu Leu

<210> 5427  
<211> 366  
<212> DNA  
<213> Homo sapiens

<400> 5427  
tgatcactgt attgcactcc agtctgggca acagagcaag actctgtcat aaacaaacca  
60  
acaaacaaat caaaaattct tgttgagtac ctgctacatg ctaagtgtc ctctaggtgc  
120  
tgaggataca tcagagggca aaatggatac agatactctg aaaaaacgtg cattctagct  
180  
gggattgggt cctccacact gtgtccaaaa ggtatgttgg ggttgctgaa gtagataaac  
240  
tggtattggc agcaggaaca gcatttatgg aacagagggg aagacacatt caaggaatga  
300  
aacatcgtct ggctggatca tgaaatgcaa ggcagatatg gcacaggagg cagacaaagg  
360  
gttgaa  
366

<210> 5428  
<211> 101  
<212> PRT  
<213> Homo sapiens

<400> 5428  
Met Phe His Ser Leu Asn Val Ser Ser Pro Leu Phe His Lys Cys Cys  
1                      5                      10                      15  
Ser Cys Cys Gln Tyr Gln Phe Ile Tyr Phe Ser Asn Pro Asn Ile Pro  
20                      25                      30  
Phe Gly His Ser Val Glu Asp Pro Ile Pro Ala Arg Met His Val Phe  
35                      40                      45  
Ser Glu Tyr Leu Tyr Pro Phe Cys Pro Leu Met Tyr Pro Gln His Leu  
50                      55                      60  
Glu Glu His Leu Ala Cys Ser Arg Tyr Ser Thr Arg Ile Phe Asp Leu  
65                      70                      75                      80  
Phe Val Gly Leu Phe Met Thr Glu Ser Cys Ser Val Ala Gln Thr Gly  
85                      90                      95  
Val Gln Tyr Ser Asp  
100

<210> 5429  
<211> 612  
<212> DNA  
<213> Homo sapiens

<400> 5429

ccggcgggcg gcaaggctcc gggccagcat gggggcttcg tggtgactgt caagcaagag  
 60  
 cgcggcgagg gtccacgcgc gggcgagaag gggccccacg aggaggaggt gagagtccct  
 120  
 gcgctgagct gggggaggcc ccgggctccc gccccagcct cgaagccccg cccaggctg  
 180  
 gatttgaatt gcttgtggct ccgcccacag cccattttcc tctggaagct gagaccccg  
 240  
 cccgtgccag ctgccacgcc cctgacaggt cctctgccac tctaagtcca ggccccgccc  
 300  
 accgcacaat gccagctctg cccactctaa ggtcccgccc acttccactc cttgggggcg  
 360  
 gcaccctccc cttggtcctg tggggccggt ctccagcaga aaaccacgcc caccaagcag  
 420  
 aggccacgcc cacaaccgaa gtcaacgcca accctgtact caaacctcgg cccatagttc  
 480  
 ctcagatccc ctcaccctg gccagggatc cctctaacc accgtgtccc gactgctgac  
 540  
 cgggcccctac ctccatcttt tccgggttct tctcccagc taggccccgc ccccatcccc  
 600  
 gcccatacgc gt  
 612

<210> 5430  
 <211> 94  
 <212> PRT  
 <213> Homo sapiens

<400> 5430  
 Pro Ala Gly Gly Lys Ala Pro Gly Gln His Gly Gly Phe Val Val Thr  
 1 5 10 15  
 Val Lys Gln Glu Arg Gly Glu Gly Pro Arg Ala Gly Glu Lys Gly Ser  
 20 25 30  
 His Glu Glu Glu Val Arg Val Pro Ala Leu Ser Trp Gly Arg Pro Arg  
 35 40 45  
 Ala Pro Ala Pro Ala Ser Lys Pro Arg Pro Arg Leu Asp Leu Asn Cys  
 50 55 60  
 Leu Trp Leu Arg Pro Gln Pro Ile Phe Leu Trp Lys Leu Arg Pro Arg  
 65 70 75 80  
 Pro Val Pro Ala Ala Thr Pro Leu Thr Gly Pro Leu Pro Leu  
 85 90

<210> 5431  
 <211> 3005  
 <212> DNA  
 <213> Homo sapiens

<400> 5431  
 nngcacgatg tcatccagca gctgccccca ccacattaca ggaccctgga gtacctgctg  
 60  
 aggcacctgg cccgcatggc gagacacagt gccaacacca gcatgcatgc ccgcaacctg  
 120  
 gccattgtct gggcacccaa cctgctacgg tccatggagc tggagtcagt gggaatgggt  
 180

ggcgcggcgg cgttccggga agttcgggtg cagtcgggtg tggaggagt tctgctcacc  
240  
catgtggacg tcctgttcag cgacaccttc acctccgccg gcctcgaccc tgcaggccgc  
300  
tgcctgctcc ccaggcccaa gtcccttgcg ggcagctgcc cctccacccg cctgctgacg  
360  
ctggaggaag ccagggcacg caccagggc cggtgggga cggccacgga gccacaact  
420  
cccaaggccc cggcctcacc tgcggaaagg aggaaagggg agagagggga gaagcagcgg  
480  
aagccagggg gcagcagctg gaagacgttc tttgcaactg gccggggccc cagtgtccct  
540  
cgaaagaagc ccctgcctg gctggggggc acccgtgcc caccgcagcc ttcaggcagc  
600  
agaccgaca ccgtcacact gagatctgcc aagagcgagg agtctctgtc atcgaggcc  
660  
agcggggctg gcctccagag gctgcacagg ctgcggcgac ccactccag cagcgacgt  
720  
ttccctgtgg gccagcacc tgetggctcc tgcgagagcc tgcctcgtc ctccctctcc  
780  
gagtcctct cctctgagtc ctccctctcc tctctgagt cctcagcagc tgggctgggg  
840  
gcactctctg ggtctccctc acaccgtacc tcagcctggc tagatgatgg tgatgagctg  
900  
gacttcagcc caccgcgtg cctggaggga ctccggggc tggactttga tcccttaacc  
960  
ttccgctgca gcagccccc cccaggggat cccgcacctc ccgccagccc agcaccccc  
1020  
gcccctgct ctgccttccc acccaggggtg acccccagg ccctctcgcc ccggggggcc  
1080  
accagccccg cctcgctgc tgcctagac atctcagag ccctggctgt atcagtgcc  
1140  
cccgtgtcc tagaactgct gggggctggg ggagcacctg cctcagccac cccaacacca  
1200  
gctctcagcc ccggccggag cctgcgcccc catctcatac ccctgctgct gcgaggagcc  
1260  
gagggccgc tgactgacgc ctgccagcag gagatgtgca gcaagctccg gggagcccag  
1320  
ggccactcg gtctgatat ggagtcacca ctgccacccc ctccctgtc tctctgccc  
1380  
cctgggggtg cccaccccc gccccctaag aaccagcac gcctcatggc cctggccctg  
1440  
gctgagcggg ctcagcaggt ggccgagcaa cagagccagc aggagtgtgg gggcacccca  
1500  
cctgcttccc aatccccctt ccaccgctcg ctgtctctgg aggtgggcgg ggagcccctg  
1560  
gggacctcag ggagtgggac acctcccaac tccctagcac acccgggtgc ctgggtccc  
1620  
ggacccccac cctacttacc aaggcaacaa agtgatggga gcctgctgag gagccagcgg  
1680  
cccatgggga cctcaaggag gggactccga ggccctgcc aggtcagtgc gcagctcagg  
1740  
gcaggtggcg ggggcaggga tgcgccagag gcagcagccc agtcccatg ttctgtcccc  
1800

tcacaggttc ctacccccgg cttcttctcc ccagccccc gggagtgcct gccacccttc  
1860  
ctcgggggtcc ccaagccagg cttgtacccc ctgggcccc catccttcca gccagttcc  
1920  
ccagccccag tctggaggag ctctctgggc cccctgcac cactcgacag gggagagaac  
1980  
ctgtactatg agatcggggc aagtgagggg tccccctatt ctggccccc ccgctcctgg  
2040  
agtcccttcc gctccatgcc ccccgacagg ctcaatgcct cctacggcat gcttgccaa  
2100  
tcacccccac tccacaggtc ccccgacttc ctgctcagct acccgccagc cccctcctgc  
2160  
tttccccctg accaccttgg ctactcagcc cccagcacc ctgctcggcg ccctacaccg  
2220  
cctgagcccc tctacgtcaa cctagctcta gggcccaggg gtccctcacc tgcctcttcc  
2280  
tcctcctctt cccctcctgc ccacccccga agccgttcag atcccggtcc ccagtcccc  
2340  
cgcttcccc agaaacaacg ggcaccctgg ggaccccgta cccctcatag ggtgccgggt  
2400  
ccctggggcc ctctgagcc tctcctgctc tacagggcag ccccgccagc ctacggaagg  
2460  
gggggagagc tccaccgagg gtccttgtag agaaatggag ggcaaagagg ggagggggct  
2520  
ggccccccac ccccttacc cactcccagc tggccccctc actctgaggg ccagaccga  
2580  
agctactgct gagcaccagc tgggaggggc cgtccctcct tcccttcacc ctactggat  
2640  
cttggcccaa ccaaaccct tgttttgtat tttcttgaac cccgaccact acccaggtt  
2700  
tctaactttg taacttgctt ctgatgtggg tccctaacct ataatctcag cttccctacc  
2760  
ctggactgaa ggggtctgcc atccccccac caccctccat cctggggggc ctgcacaaa  
2820  
tctggggtgg gaggggctag gctgaccca tcctcctctc cctccaggag ccccagcat  
2880  
gtcctgacct gtgcacgggg atggggggac aactcctacc cttctttccc cacatgcccc  
2940  
actaaaccat ctgacaacat taatgaataa aatggtgaaa atgtgaaaaa aaaaaaaaaa  
3000  
aaaaa  
3005

&lt;210&gt; 5432

&lt;211&gt; 863

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5432

Xaa	His	Asp	Val	Ile	Gln	Gln	Leu	Pro	Pro	Pro	His	Tyr	Arg	Thr	Leu
1				5				10						15	
Glu	Tyr	Leu	Leu	Arg	His	Leu	Ala	Arg	Met	Ala	Arg	His	Ser	Ala	Asn
				20				25					30		
Thr	Ser	Met	His	Ala	Arg	Asn	Leu	Ala	Ile	Val	Trp	Ala	Pro	Asn	Leu

		35					40					45						
Leu	Arg	Ser	Met	Glu	Leu	Glu	Ser	Val	Gly	Met	Gly	Gly	Ala	Ala	Ala			
	50					55					60							
Phe	Arg	Glu	Val	Arg	Val	Gln	Ser	Val	Val	Val	Glu	Phe	Leu	Leu	Thr			
65					70					75					80			
His	Val	Asp	Val	Leu	Phe	Ser	Asp	Thr	Phe	Thr	Ser	Ala	Gly	Leu	Asp			
				85					90					95				
Pro	Ala	Gly	Arg	Cys	Leu	Leu	Pro	Arg	Pro	Lys	Ser	Leu	Ala	Gly	Ser			
			100					105					110					
Cys	Pro	Ser	Thr	Arg	Leu	Leu	Thr	Leu	Glu	Glu	Ala	Gln	Ala	Arg	Thr			
		115					120					125						
Gln	Gly	Arg	Leu	Gly	Thr	Pro	Thr	Glu	Pro	Thr	Thr	Pro	Lys	Ala	Pro			
	130					135					140							
Ala	Ser	Pro	Ala	Glu	Arg	Arg	Lys	Gly	Glu	Arg	Gly	Glu	Lys	Gln	Arg			
145					150					155					160			
Lys	Pro	Gly	Gly	Ser	Ser	Trp	Lys	Thr	Phe	Phe	Ala	Leu	Gly	Arg	Gly			
				165					170					175				
Pro	Ser	Val	Pro	Arg	Lys	Lys	Pro	Leu	Pro	Trp	Leu	Gly	Gly	Thr	Arg			
			180					185					190					
Ala	Pro	Pro	Gln	Pro	Ser	Gly	Ser	Arg	Pro	Asp	Thr	Val	Thr	Leu	Arg			
		195					200					205						
Ser	Ala	Lys	Ser	Glu	Glu	Ser	Leu	Ser	Ser	Gln	Ala	Ser	Gly	Ala	Gly			
	210					215					220							
Leu	Gln	Arg	Leu	His	Arg	Leu	Arg	Arg	Pro	His	Ser	Ser	Ser	Asp	Ala			
225					230					235					240			
Phe	Pro	Val	Gly	Pro	Ala	Pro	Ala	Gly	Ser	Cys	Glu	Ser	Leu	Ser	Ser			
				245					250					255				
Ser	Ser	Ser	Ser	Glu	Ser	Ser	Ser	Ser	Glu	Ser	Ser	Ser	Ser	Ser	Ser			
			260					265					270					
Glu	Ser	Ser	Ala	Ala	Gly	Leu	Gly	Ala	Leu	Ser	Gly	Ser	Pro	Ser	His			
		275					280					285						
Arg	Thr	Ser	Ala	Trp	Leu	Asp	Asp	Gly	Asp	Glu	Leu	Asp	Phe	Ser	Pro			
	290					295					300							
Pro	Arg	Cys	Leu	Glu	Gly	Leu	Arg	Gly	Leu	Asp	Phe	Asp	Pro	Leu	Thr			
305					310					315					320			
Phe	Arg	Cys	Ser	Ser	Pro	Thr	Pro	Gly	Asp	Pro	Ala	Pro	Pro	Ala	Ser			
				325					330					335				
Pro	Ala	Pro	Pro	Ala	Pro	Ala	Ser	Ala	Phe	Pro	Pro	Arg	Val	Thr	Pro			
			340					345					350					
Gln	Ala	Ile	Ser	Pro	Arg	Gly	Pro	Thr	Ser	Pro	Ala	Ser	Pro	Ala	Ala			
		355					360					365						
Leu	Asp	Ile	Ser															

465						470						475						480
Ala	Glu	Arg	Ala	Gln	Gln	Val	Ala	Glu	Gln	Gln	Ser	Gln	Gln	Glu	Cys			
				485						490						495		
Gly	Gly	Thr	Pro	Pro	Ala	Ser	Gln	Ser	Pro	Phe	His	Arg	Ser	Leu	Ser			
				500						505						510		
Leu	Glu	Val	Gly	Gly	Glu	Pro	Leu	Gly	Thr	Ser	Gly	Ser	Gly	Pro	Pro			
				515						520						525		
Pro	Asn	Ser	Leu	Ala	His	Pro	Gly	Ala	Trp	Val	Pro	Gly	Pro	Pro	Pro			
				530						535						540		
Tyr	Leu	Pro	Arg	Gln	Gln	Ser	Asp	Gly	Ser	Leu	Leu	Arg	Ser	Gln	Arg			
				545						550						555		
Pro	Met	Gly	Thr	Ser	Arg	Arg	Gly	Leu	Arg	Gly	Pro	Ala	Gln	Val	Ser			
				565						570						575		
Ala	Gln	Leu	Arg	Ala	Gly	Gly	Gly	Gly	Arg	Asp	Ala	Pro	Glu	Ala	Ala			
				580						585						590		
Ala	Gln	Ser	Pro	Cys	Ser	Val	Pro	Ser	Gln	Val	Pro	Thr	Pro	Gly	Phe			
				595						600						605		
Phe	Ser	Pro	Ala	Pro	Arg	Glu	Cys	Leu	Pro	Pro	Phe	Leu	Gly	Val	Pro			
				610						615						620		
Lys	Pro	Gly	Leu	Tyr	Pro	Leu	Gly	Pro	Pro	Ser	Phe	Gln	Pro	Ser	Ser			
				625						630						635		
Pro	Ala	Pro	Val	Trp	Arg	Ser	Ser	Leu	Gly	Pro	Pro	Ala	Pro	Leu	Asp			
				645						650						655		
Arg	Gly	Glu	Asn	Leu	Tyr	Tyr	Glu	Ile	Gly	Ala	Ser	Glu	Gly	Ser	Pro			
				660						665						670		
Tyr	Ser	Gly	Pro	Thr	Arg	Ser	Trp	Ser	Pro	Phe	Arg	Ser	Met	Pro	Pro			
				675						680						685		
Asp	Arg	Leu	Asn	Ala	Ser	Tyr	Gly	Met	Leu	Gly	Gln	Ser	Pro	Pro	Leu			
				690						695						700		
His	Arg	Ser	Pro	Asp	Phe	Leu	Leu	Ser	Tyr	Pro	Pro	Ala	Pro	Ser	Cys			
				705						710						715		
Phe	Pro	Pro	Asp	His	Leu	Gly	Tyr	Ser	Ala	Pro	Gln	His	Pro	Ala	Arg			
				725						730						735		
Arg	Pro	Thr	Pro	Pro	Glu	Pro	Leu	Tyr	Val	Asn	Leu	Ala	Leu	Gly	Pro			
				740						745						750		
Arg	Gly	Pro	Ser	Pro	Ala	Ser	Ser	Ser	Ser	Ser	Ser	Pro	Pro	Ala	His			
				755						760						765		
Pro	Arg	Ser	Arg	Ser	Asp	Pro	Gly	Pro	Pro	Val	Pro	Arg	Leu	Pro	Gln			
				770						775						780		
Lys	Gln	Arg	Ala	Pro	Trp	Gly	Pro	Arg	Thr	Pro	His	Arg	Val	Pro	Gly			
				785						790						795		
Pro	Trp	Gly	Pro	Pro	Glu	Pro	Leu	Leu	Leu	Tyr	Arg	Ala	Ala	Pro	Pro			
				805						810						815		
Ala	Tyr	Gly	Arg	Gly	Gly	Glu	Leu	His	Arg	Gly	Ser	Leu	Tyr	Arg	Asn			
				820						825						830		
Gly	Gly	Gln	Arg	Gly	Glu	Gly	Ala	Gly	Pro	Pro	Pro	Pro	Tyr	Pro	Thr			
				835						840						845		
Pro	Ser	Trp	Ser	Leu	His	Ser	Glu	Gly	Gln	Thr	Arg	Ser	Tyr	Cys				
				850						855						860		

```
<210> 5433
<211> 385
<212> DNA
<213> Homo sapiens
```

&lt;400&gt; 5433

gatctaacca acctccacta ctcgacaccc ctgccagcct ccctggacac caccgaccac  
60  
cactttggca gtatgagtgt ggggaatagt gtgaacaaca tcccagctgc tatgaccac  
120  
ctgggtataa gaagctcctc tggctctccag agttctcgga gtaaccctc catccaagcc  
180  
acgctcaata agactgtgct ttcctcttcc ttaaataacc acccacagac atctgttccc  
240  
aacgcactctg ctcttcaccc ttcgctccgt ctgttttccc ttagcaaccc atctcttccc  
300  
accacaaacc tgagcggccc gtctcggcgt cggcagcctc ccgtcagccc tctcagcctt  
360  
tctcctggcc ctgaagcaca tcaag  
385

&lt;210&gt; 5434

&lt;211&gt; 128

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5434

Asp	Leu	Thr	Asn	Leu	His	Tyr	Ser	Thr	Pro	Leu	Pro	Ala	Ser	Leu	Asp
1			5						10					15	
Thr	Thr	Asp	His	His	Phe	Gly	Ser	Met	Ser	Val	Gly	Asn	Ser	Val	Asn
			20					25					30		
Asn	Ile	Pro	Ala	Ala	Met	Thr	His	Leu	Gly	Ile	Arg	Ser	Ser	Ser	Gly
		35					40					45			
Leu	Gln	Ser	Ser	Arg	Ser	Asn	Pro	Ser	Ile	Gln	Ala	Thr	Leu	Asn	Lys
	50					55					60				
Thr	Val	Leu	Ser	Ser	Ser	Leu	Asn	Asn	His	Pro	Gln	Thr	Ser	Val	Pro
65					70					75					80
Asn	Ala	Ser	Ala	Leu	His	Pro	Ser	Leu	Arg	Leu	Phe	Ser	Leu	Ser	Asn
			85						90					95	
Pro	Ser	Leu	Ser	Thr	Thr	Asn	Leu	Ser	Gly	Pro	Ser	Arg	Arg	Arg	Gln
			100						105					110	
Pro	Pro	Val	Ser	Pro	Leu	Thr	Leu	Ser	Pro	Gly	Pro	Glu	Ala	His	Gln
			115						120					125	

&lt;210&gt; 5435

&lt;211&gt; 617

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5435

ctcacacctg taatcacagc actttgggag gctgaggtgt gagccactgc tcttggcttg  
60  
aaacagataa ttctttatat tcaacctggt gtcaaaattt ttagaaacat tttcccagtt  
120  
ccttgataaa gtatactttg tataacttct ggcaaaccat aattatgaac tcacattact  
180  
atagtactat aatactgcag aaagggatct tgcgtttcag aaatgtcact catccagttt  
240

tcctccctt tctctaacc catctccctc ccaggctcat ggtttctgtt gcaatcctct  
300  
ttctccttac acaaggcaag aagttttctt accaatagat cagacctgtg aaggactgcc  
360  
cgacatgac tgatatggtt gttcttcatt ttgggctgta gtattttaaa gtagagggtt  
420  
gctctgatgg tcccatcact gcttgccatt gtctttccct ttgctctagc tatcagggga  
480  
tgttgcttta agtttggtcc ccaggcttta ctgccaagag ggaaattcat acccacttta  
540  
acaagggtgtg aagcttatct tacagttgct aatgcctcac tgaccttttg gaaagggtcat  
600  
agttaccctt cacgcgt  
617

<210> 5436  
<211> 119  
<212> PRT  
<213> Homo sapiens

<400> 5436  
Met Asn Phe Pro Leu Gly Ser Lys Ala Trp Gly Thr Asn Leu Lys Gln  
1 5 10 15  
His Pro Leu Ile Ala Arg Ala Lys Gly Lys Thr Met Ala Ser Ser Asp  
20 25 30  
Gly Thr Ile Arg Ala Asn Leu Tyr Phe Lys Ile Leu Gln Pro Lys Met  
35 40 45  
Lys Asn Asn His Ile Arg Ser Cys Arg Ala Val Leu His Arg Ser Asp  
50 55 60  
Leu Leu Val Arg Lys Leu Leu Ala Leu Cys Lys Glu Lys Glu Asp Cys  
65 70 75 80  
Asn Arg Asn His Glu Pro Gly Arg Glu Met Gly Leu Glu Lys Gly Glu  
85 90 95  
Glu Asn Trp Met Ser Asp Ile Ser Glu Thr Gln Asp Pro Phe Leu Gln  
100 105 110  
Tyr Tyr Ser Thr Ile Val Met  
115

<210> 5437  
<211> 1422  
<212> DNA  
<213> Homo sapiens

<400> 5437  
ttccgcggtg gaggggtgct atactgggat gcaggcgcg cggggactgg cagcaatcat  
60  
gccctgggag ctaacgtaga gctttggata atgcttttgc aagttgtacg agaagggaag  
120  
ttctcggggg ttctgacctc ctgcagcctc ctcttgccctc gggctgccca gatcttggcg  
180  
gctgaggctg gcttaccttc gagccgttcc ttcattgggat ttgctgctcc cttcaccaac  
240  
aagcgaaagg cttactcgga gcgtagaatc atgggggtact caatgcagga gatgtatgag  
300



gtggtgtcca acgtccagga gtatcgtgag tttgtgccct ggtgtaagaa gtctctggtg  
 360  
 gtatccagcc gtaaggggtca tttgaaagcc cagctggagg ttggctttcc acctgtcatg  
 420  
 gaacgttaca cctctgcagt ttccatgggc aaacctcaca tggccaaggc tgtttgtact  
 480  
 gatggcaagc tcttcaacca cttagagact atttggcgat tcagccctgg tattcctgcc  
 540  
 taccctcgaa cctgcactgt ggacttttcg atttcctttg aatttcgttc tctgctgcac  
 600  
 tcccagctgg ccaccatggt ttttgatgag gttgtcaaac agaattgttc tgcctttgag  
 660  
 cgtcggggcag ccaccaagtt tggccagaa acagccatcc cccgtgaact gatgttccat  
 720  
 gaggtgcacc agacttgagg caagggattg ctccctgacc tcccttctac cccacttccc  
 780  
 tacacaattc tcttatttat ttggtttggc tcctgttcca atttgaaagg agtctgtgtt  
 840  
 cataatactg tttctcctct caatttccca gaaattgggt tctatgctgg ctggaaatgt  
 900  
 tgggggaaaag agaaggcaaa ggatgtggaa atgagatgtg cttaggaaaag ggtcaggccc  
 960  
 atcgtaggag caccatatgc ctgcagcctt ttcactacga attagaataa ggactatgtg  
 1020  
 gttgtctctg gaccttatca agacacctta gtgtctgacc aggggacgat agtaactttt  
 1080  
 ctaaggattg aataaattga gcttttcttc tggcacagag gtactgagtg gtaagtaact  
 1140  
 tttaccctgc ctgagattcc tcaggagaaa aggcaacctg cctccagcct gaaatacata  
 1200  
 aagcctcatt ttaagactgt aagtccatgc tgcctggcta ctagagagca aggggctttc  
 1260  
 ttaccaccag tgctgaggag aaaagtactg aacggaaacg gagttgtctt tgtactcttg  
 1320  
 agttgtacct tattcttcca cttggcctga gtttttataa aatttcaata aattgtgaca  
 1380  
 gtgtgaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 1422

&lt;210&gt; 5438

&lt;211&gt; 245

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5438

Phe	Arg	Gly	Gly	Gly	Val	Leu	Tyr	Trp	Asp	Ala	Gly	Ala	Ala	Gly	Thr
1				5					10					15	
Gly	Ser	Asn	His	Ala	Leu	Gly	Ala	Asn	Val	Glu	Leu	Trp	Ile	Met	Leu
			20					25					30		
Leu	Gln	Val	Val	Arg	Glu	Gly	Lys	Phe	Ser	Gly	Phe	Leu	Thr	Ser	Cys
		35					40				45				
Ser	Leu	Leu	Leu	Pro	Arg	Ala	Ala	Gln	Ile	Leu	Ala	Ala	Glu	Ala	Gly
	50					55					60				
Leu	Pro	Ser	Ser	Arg	Ser	Phe	Met	Gly	Phe	Ala	Ala	Pro	Phe	Thr	Asn

65                                      70                                      75                                      80  
 Lys Arg Lys Ala Tyr Ser Glu Arg Arg Ile Met Gly Tyr Ser Met Gln  
    85                                      90                                      95  
 Glu Met Tyr Glu Val Val Ser Asn Val Gln Glu Tyr Arg Glu Phe Val  
    100                                      105                                      110  
 Pro Trp Cys Lys Lys Ser Leu Val Val Ser Ser Arg Lys Gly His Leu  
    115                                      120                                      125  
 Lys Ala Gln Leu Glu Val Gly Phe Pro Pro Val Met Glu Arg Tyr Thr  
    130                                      135                                      140  
 Ser Ala Val Ser Met Val Lys Pro His Met Val Lys Ala Val Cys Thr  
 145                                      150                                      155                                      160  
 Asp Gly Lys Leu Phe Asn His Leu Glu Thr Ile Trp Arg Phe Ser Pro  
    165                                      170                                      175  
 Gly Ile Pro Ala Tyr Pro Arg Thr Cys Thr Val Asp Phe Ser Ile Ser  
    180                                      185                                      190  
 Phe Glu Phe Arg Ser Leu Leu His Ser Gln Leu Ala Thr Met Phe Phe  
    195                                      200                                      205  
 Asp Glu Val Val Lys Gln Asn Val Ala Ala Phe Glu Arg Arg Ala Ala  
    210                                      215                                      220  
 Thr Lys Phe Gly Pro Glu Thr Ala Ile Pro Arg Glu Leu Met Phe His  
 225                                      230                                      235                                      240  
 Glu Val His Gln Thr  
    245

&lt;210&gt; 5439

&lt;211&gt; 4234

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5439

ggaggttctt cactcgcgac tgacggagct gcggtggcgt ctccacacgc aaccatgaag  
 60  
 ttgaaggaca caaatcaag gccaaagcag tcaagctgtg gcaaatttca gacaaaggga  
 120  
 atcaaagtgt tgggaaaatg gaaggaagtg aagattgacc caaatatgtt tgcagatgga  
 180  
 cagatggatg acttggtgtg ctttgaggaa ttgacagatt accagttggt ctcccctgcc  
 240  
 aagaatccct ccagtctctt ctcaaaggaa gcacccaaga gaaaggcaca agctgtttca  
 300  
 gaagaagagg aggaggagga gggaaagtct agctcaccaa agaaaaagat caagttgaag  
 360  
 aaaagtaaaa atgtagcaac tgaaggaacc agtaccaga aagaatttga agtgaaagat  
 420  
 cctgagctgg aggccaggg agatgacatg gtttgtgatg atccggaggc tggggagatg  
 480  
 acatcagaaa acctggtcca aactgctcca aaaaagaaga aaaataaagg gaaaaaaggg  
 540  
 ttggagcctt ctgagagcac tgctgccaaag gtgccccaaa aagcgaagac atggattcct  
 600  
 gaagttcatg atcagaaagc agatgtgtca gcttggaaag acctgtttgt tcccaggccg  
 660  
 gttctccgag cactcagctt tctaggcttc tctgcacca caccaatcca agcctgacc  
 720

ttggcacctg ccatccgtga caaactggac atccttgggg ctgctgagac aggaagtggg  
780  
aaaactcttg cctttgccat cccaatgatt catgcggtgt tgcagtggca gaagaggaat  
840  
gctgccccctc ctccaagtaa caccgaagca ccacctggag agaccagaac tgaggccgga  
900  
gctgagacta gatcaccagg caaggctgaa gctgagtctg atgcattgcc tgacgatact  
960  
gtaattgaga gtgaagcact gcccagtgat attgcagccg aggccagagc caagactgga  
1020  
ggcactgtct cagaccaggc gttgctcttt ggtgacgatg atgctggtga agggccttct  
1080  
tccctgatca gggagaaacc tgttcccaa cagaatgaga atgaggagga aaatcttgat  
1140  
aaagagcaga ctggaaatct aaaacaggag ttggatgaca aaagcgccac ctgtaaggca  
1200  
tatccaaagc gtcctctgct tggactgggt ctgactccca ctcgagagct ggccgtccag  
1260  
gtcaaacagc acattgatgc tgtggccagg ttacaggaa ttaaaactgc tattttggtt  
1320  
ggtggaatgt ccacgcagaa acagcagagg atgctgaacc gtcgtcctga gattgtggtt  
1380  
gctactccag gccggctgtg ggaattaatt aaagaaaagc attatcattt gaggaacctt  
1440  
cggcagctca ggtgcctggt agtggatgag gctgaccgga tggttgagaa aggccatttt  
1500  
gctgagctct cacagctgct agagatgctc aatgactccc aatacaaccc aaagagacaa  
1560  
acgcttgttt tttctgccac actcacctg gtgcatcagg ctctgctcg aatccttcat  
1620  
aagaagcaca ccaagaaaat ggataaaaca gccaaacttg acctccttat gcagaaaatt  
1680  
ggcatgaggg gcaagcccaa ggtcattgac ctcaagga atgaggccac ggtggagacg  
1740  
ctaacagaga ccaagatcca ttgtgagact gatgagaaag acttctactt gtactacttc  
1800  
ctgatgcagt atccaggccg cagcttagtg ttgccaaca gtatctctg catcaaacgc  
1860  
ctctctgggc tcctcaaagt ccttgatata atgcccttga ccctgcatgc ctgtatgcac  
1920  
cagaagcaga ggctcagaaa cctggagcag ttgcccgtc tggaagactg tgttctcttg  
1980  
gcaacagatg tggcggtctg ggtctggat attcctaaag tccagcatgt catccattac  
2040  
cagggtccac gtacctcgga gatttatgtc caccgaagtg gtcgaactgc tcgagctacc  
2100  
aatgaaggcc tcagtctgat gctcattggg cctgaggatg tgatcaactt taagaagatt  
2160  
tacaaaacgc tcaagaaaga tgaggatata cactgttcc ccgtgcagac aaaatacatg  
2220  
gatgtggtca aggagcgaat ccgttttagct cgacagattg agaaatctga gtatcggaac  
2280  
ttccaggctt gctgcacaa ctcttgatt gagcaggcag cagctgcctt ggagattgag  
2340

ctggaagaag acatgtataa gggaggaaaa gctgaccagc aagaagaacg tcggagacaa  
2400  
aagcagatga aggttctgaa gaaggagctg cgccacctgc tgtcccagcc actgtttacg  
2460  
gagagccaga aaaccaagta tcccactcag tctggcaagc cgcccctgct tgtgtctgcc  
2520  
ccaagtaaga gcgagtctgc tttgagctgt ctctccaagc agaagaagaa gaagacaaag  
2580  
aagccgaagg agccacagcc ggaacagcca cagccaagta caagtgcaaa ttaactgccc  
2640  
tggtcaagtg tgtcagtgc tgcacattgg tttctgttct ctggctatct gcaaaacctc  
2700  
tcccacctt gtgtttcact ccaccaccaa ccccaggtaa aaaagtctcc ctctcttcca  
2760  
ctcacacca tagcgggaga gacctcatgc agatttgcac tgttttggag taagaattca  
2820  
atgcagcagc ttaatttttc tgtattgcag tgtttatagg cttcttgtgt gttaaacttg  
2880  
atttcataaa ttaaaaacaa tggtcagaaa aaaaaaaaa accggaaccg gcggcaccag  
2940  
ctcggagaga aatcgatggt gtagtgacct tcagtaaaag agcggttttt catagagggtg  
3000  
ccgtttttaga ctacctatct aagaggcacg aaaaacaaat acatctaata ggttaagtaa  
3060  
aaaaccatct atttcggaca ataaaagtta tttctacac acgttggtct tcattttact  
3120  
cgtaaacagt atcatacatc cttctaagct tatctttttg acgtgaaagt gtagtagtat  
3180  
gtctccacct ggcagctatg tagttaatat tttgtctgt tgtaatgtta tcaagtaccg  
3240  
aacattttcc taatgaaata gtggaaaaga caacctttt ctccatttct atttggttt  
3300  
ttagatcacg tacataacaa ggaatcgaat aaataatgaa gtgttttata aagagtatcc  
3360  
gtcttgagg gagattccag ttgggagggt ccataggcag ttcttaccac gaagatgtcg  
3420  
attccattct ccaacacca ctaccgaatt ccacaaggat ttgggaatct tcttgaaggg  
3480  
ctgacacgcg agattctgag agagcaaccg gacaatatac cagcttttgc agcagcctat  
3540  
tttgagagcc ttctagagaa aagagagaaa accaactttg atccagcaga atgggggagt  
3600  
aaggtagaag accgcttcta taacaatcat gcattcgagg agcaagaacc acctgagaaa  
3660  
agtgatccta aacaagaaga gtctcagata tctgggaagg aggaagagac atcagtcacc  
3720  
atcttagact cttctgagga agataaggaa aaagaagagg ttgctgctgt caaaatccaa  
3780  
gctgccttcc ggggacacat agccagagag gaggcaaaga aaatgaaaac aaatagtctt  
3840  
caaatgagg aaaaagagga aaacaagtga ggacactggt ttacctcca ggaaacatga  
3900  
aaaataatcc aaatccatca accttcttat taatgtcatt tctccttgag gaaggaagat  
3960

ttgatgttgt gaaataacat tcgttactgt tgtgaaaatc tgtcatgagc atttggtttaa  
 4020  
 taagcatacc attgaaacat gccacttgaa gatttctctg agatcatgag tttgtttaca  
 4080  
 cttgtctcaa gcctatctat agagaccctt ggatttagaa ttatagaact aaagtatctg  
 4140  
 agattacaga gatctcagag gttatgtgtt ctaactatta tcaaataaat aaatcctctc  
 4200  
 tatcacatcc ccaaaaaaaaa aaaaaaaaaa aaaa  
 4234

<210> 5440

<211> 461

<212> PRT

<213> Homo sapiens

<400> 5440

Leu	Ala	Val	Gln	Val	Lys	Gln	His	Ile	Asp	Ala	Val	Ala	Arg	Phe	Thr
1			5					10					15		
Gly	Ile	Lys	Thr	Ala	Ile	Leu	Val	Gly	Gly	Met	Ser	Thr	Gln	Lys	Gln
		20					25					30			
Gln	Arg	Met	Leu	Asn	Arg	Arg	Pro	Glu	Ile	Val	Val	Ala	Thr	Pro	Gly
	35				40					45					
Arg	Leu	Trp	Glu	Leu	Ile	Lys	Glu	Lys	His	Tyr	His	Leu	Arg	Asn	Leu
	50				55				60						
Arg	Gln	Leu	Arg	Cys	Leu	Val	Val	Asp	Glu	Ala	Asp	Arg	Met	Val	Glu
65				70				75					80		
Lys	Gly	His	Phe	Ala	Glu	Leu	Ser	Gln	Leu	Leu	Glu	Met	Leu	Asn	Asp
		85						90					95		
Ser	Gln	Tyr	Asn	Pro	Lys	Arg	Gln	Thr	Leu	Val	Phe	Ser	Ala	Thr	Leu
	100						105						110		
Thr	Leu	Val	His	Gln	Ala	Pro	Ala	Arg	Ile	Leu	His	Lys	Lys	His	Thr
	115						120					125			
Lys	Lys	Met	Asp	Lys	Thr	Ala	Lys	Leu	Asp	Leu	Leu	Met	Gln	Lys	Ile
	130					135				140					
Gly	Met	Arg	Gly	Lys	Pro	Lys	Val	Ile	Asp	Leu	Thr	Arg	Asn	Glu	Ala
145				150				155					160		
Thr	Val	Glu	Thr	Leu	Thr	Glu	Thr	Lys	Ile	His	Cys	Glu	Thr	Asp	Glu
		165						170					175		
Lys	Asp	Phe	Tyr	Leu	Tyr	Tyr	Phe	Leu	Met	Gln	Tyr	Pro	Gly	Arg	Ser
	180						185						190		
Leu	Val	Phe	Ala	Asn	Ser	Ile	Ser	Cys	Ile	Lys	Arg	Leu	Ser	Gly	Leu
	195					200						205			
Leu	Lys	Val	Leu	Asp	Ile	Met	Pro	Leu	Thr	Leu	His	Ala	Cys	Met	His
	210				215						220				
Gln	Lys	Gln	Arg	Leu	Arg	Asn	Leu	Glu	Gln	Phe	Ala	Arg	Leu	Glu	Asp
225				230						235			240		
Cys	Val	Leu	Leu	Ala	Thr	Asp	Val	Ala	Ala	Arg	Gly	Leu	Asp	Ile	Pro
		245						250					255		
Lys	Val	Gln	His	Val	Ile	His	Tyr	Gln	Val	Pro	Arg	Thr	Ser	Glu	Ile
	260						265					270			
Tyr	Val	His	Arg	Ser	Gly	Arg	Thr	Ala	Arg	Ala	Thr	Asn	Glu	Gly	Leu
	275					280						285			
Ser	Leu	Met	Leu	Ile	Gly	Pro	Glu	Asp	Val	Ile	Asn	Phe	Lys	Lys	Ile

```

      290      295      300
Tyr Lys Thr Leu Lys Lys Asp Glu Asp Ile Pro Leu Phe Pro Val Gln
305      310      315      320
Thr Lys Tyr Met Asp Val Val Lys Glu Arg Ile Arg Leu Ala Arg Gln
      325      330      335
Ile Glu Lys Ser Glu Tyr Arg Asn Phe Gln Ala Cys Leu His Asn Ser
      340      345      350
Trp Ile Glu Gln Ala Ala Ala Ala Leu Glu Ile Glu Leu Glu Glu Asp
      355      360      365
Met Tyr Lys Gly Gly Lys Ala Asp Gln Gln Glu Glu Arg Arg Arg Gln
      370      375      380
Lys Gln Met Lys Val Leu Lys Lys Glu Leu Arg His Leu Leu Ser Gln
385      390      395      400
Pro Leu Phe Thr Glu Ser Gln Lys Thr Lys Tyr Pro Thr Gln Ser Gly
      405      410      415
Lys Pro Pro Leu Leu Val Ser Ala Pro Ser Lys Ser Glu Ser Ala Leu
      420      425      430
Ser Cys Leu Ser Lys Gln Lys Lys Lys Lys Thr Lys Lys Pro Lys Glu
      435      440      445
Pro Gln Pro Glu Gln Pro Gln Pro Ser Thr Ser Ala Asn
      450      455      460

```

&lt;210&gt; 5441

&lt;211&gt; 1635

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5441

```

ncagacacac tgtgacggct gcctgaagct agtgagtcgc ggcgcgcgcgc actggtggtt
60
gggtcagtgc cgcgcgccga tcggtcggtta ccgcgagggcg ctggtggcct tcaggctgga
120
cggcgcgggt cagccctggt tcgccggctt ctgggtcttt gaacagccgc gatgtcgatc
180
ttcaccccca ccaaccagat ccgcctaacc aatgtggccg tggtaggat gaagcgtgcc
240
gggaagcgc tgcgaatcgc ctgctacaaa aacaaggctg tcggctggcg gagcggcgtg
300
gaaaaagacc tcgatgaagt tctgcagacc cactcagtgt ttgtaaatgt ttctaaaggt
360
caggttgcca aaaaggaaga tctcatcagt gcggttgga cagatgacca aactgaaatc
420
tgtaagcaga ttttgactaa aggagaagtt caagtatcag ataaagaaag acacacacaa
480
ctggagcaga tgtttaggga cattgcaact attgtggcag acaaatgtgt gaatcctgaa
540
acaaagagac catacccgat gatccttatt gagagagcca tgaaggacat ccactattcg
600
gtgaaaacca acaagagtac aaaacagcag gctttggaag tgataaagca gttaaaagag
660
aaaatgaaga tagaacgtgc tcacatgagg cttcggttca tccttccagt gaatgaaggc
720
aagaagctga aagaaaagct caagccactg atcaaggtca tagaaagtga agattatggc
780

```

caacagttag aaatcgtatg tctgattgac ccgggctgct tccgagaaat tgatgagcta  
 840  
 ataaaaaagg aaactaaagg caaagggttct ttggaagtac tcaatctgaa agatgtagaa  
 900  
 gaaggagatg agaaatttga atgacaccca tcaatctctt cacctctaaa aactaaagt  
 960  
 gtttccgttt ccgacggcac tgtttcatgt ctgtggtctg ccaaatactt gcttaaacta  
 1020  
 tttgacattt tctatctttg tgttaacagt ggacacagca aggctttcct acataagtat  
 1080  
 aataatgtgg gaatgatttg gttttaatta taaactgggg tctaaatcct aaagcaaaat  
 1140  
 tgaaactcca agatgcaaag tccagagtgg cattttgcta ctctgtctca tgccttgata  
 1200  
 gctttccaaa atgaaagtta cttgaggcag ctcttggtgg tgaaaagtta tttgtacagt  
 1260  
 agagtaagat tattaggggt atgtctatac aacaaaaggg ggggtctttc ctaaaaaaga  
 1320  
 aaacatatga tgcttcattt ctacttaatg gaacttgtgt tctgagggtc attatggtat  
 1380  
 cgtaataata agcttggtat atgttcctga ttatctgaga aacagatata gaaaaattgt  
 1440  
 gtcggactta aataattttc gttgaacatg ctgccataac ttagattatt cttgggttaa  
 1500  
 aaataaaagt cacttatctt taattcttaa agtttataat atatattaat atagctaaaa  
 1560  
 ttgtatgtaa tcaataaaac cactcttatg tttattaaac tatggcttgt gtttctagac  
 1620  
 aaaaaaaaaa aaaaa  
 1635

<210> 5442  
 <211> 250  
 <212> PRT  
 <213> Homo sapiens

<400> 5442  
 Met Ser Ile Phe Thr Pro Thr Asn Gln Ile Arg Leu Thr Asn Val Ala  
 1 5 10 15  
 Val Val Arg Met Lys Arg Ala Gly Lys Arg Phe Glu Ile Ala Cys Tyr  
 20 25 30  
 Lys Asn Lys Val Val Gly Trp Arg Ser Gly Val Glu Lys Asp Leu Asp  
 35 40 45  
 Glu Val Leu Gln Thr His Ser Val Phe Val Asn Val Ser Lys Gly Gln  
 50 55 60  
 Val Ala Lys Lys Glu Asp Leu Ile Ser Ala Phe Gly Thr Asp Asp Gln  
 65 70 75 80  
 Thr Glu Ile Cys Lys Gln Ile Leu Thr Lys Gly Glu Val Gln Val Ser  
 85 90 95  
 Asp Lys Glu Arg His Thr Gln Leu Glu Gln Met Phe Arg Asp Ile Ala  
 100 105 110  
 Thr Ile Val Ala Asp Lys Cys Val Asn Pro Glu Thr Lys Arg Pro Tyr  
 115 120 125  
 Thr Val Ile Leu Ile Glu Arg Ala Met Lys Asp Ile His Tyr Ser Val

130	135	140
Lys Thr Asn Lys Ser Thr	Lys Gln Gln Ala Leu	Glu Val Ile Lys Gln
145	150	155
Leu Lys Glu Lys Met Lys	Ile Glu Arg Ala His	Met Arg Leu Arg Phe
165	170	175
Ile Leu Pro Val Asn Glu	Gly Lys Lys Leu Lys	Glu Lys Leu Lys Pro
180	185	190
Leu Ile Lys Val Ile Glu	Ser Glu Asp Tyr Gly	Gln Gln Leu Glu Ile
195	200	205
Val Cys Leu Ile Asp Pro	Gly Cys Phe Arg Glu	Ile Asp Glu Leu Ile
210	215	220
Lys Lys Glu Thr Lys Gly	Lys Gly Ser Leu Glu	Val Leu Asn Leu Lys
225	230	235
Asp Val Glu Glu Gly Asp	Glu Lys Phe Glu	
245	250	

<210> 5443  
 <211> 2021  
 <212> DNA  
 <213> Homo sapiens

<400> 5443  
 cagatgcaga cactcactca gcctctgcct cagagaggta ccatgggtcc tggccacatt  
 60  
 aggggaagtag gcacttgaac cacctgctgt ctctctagct tatgccttga ggcggtggat  
 120  
 ggggaggtgg cgtgttcct ctcatctgca ataggatggc ccgaggtagc agtcctgaag  
 180  
 ggaacagcag ggatggtagg caggaagaat ggaggtctga ccaggctggc ggctgggaat  
 240  
 gaagccaggc cctttgcttc ccttggcacc tctcacaggc cctgccctct gctccacagg  
 300  
 ctggaggaag tccccctgga ggtgctgagg cagagggagt ccaagtggct ggacatgctc  
 360  
 aacaactggg acaaatggat ggccaagaag cacaaaaaga ttcgtctgcy gtgccaaaag  
 420  
 ggcacccgc cttctctgcy gggccgtgct tggcagtacc tgtcaggagg caaggtgaag  
 480  
 ttacagcaga accctggaaa gtttgacgag ctggacatgt cccctgggga cccaagtgg  
 540  
 ctggacgtga ttgagcgtga cctgcaccgg cagttcccat tccatgagat gtttgtgtcc  
 600  
 cgggggggccc acggccagca ggacctattc cgtgtgctga aggcctacac gctgtaccgg  
 660  
 cccgaggagg gctactgcca ggcccaggcg cccattgccg ctgtcttgct catgcatatg  
 720  
 cctgctgagc aagccttctg gtgcctggta cagatctgtg agaagtacct gcccggctac  
 780  
 tacagcgaga aactggaggc gatccagctg gacggggaga tccttttctc gctgttgag  
 840  
 aaggtgtcgc cgggtggcca caagcacctc agccgtcaga agatcgaccc gctcctctat  
 900  
 atgacagaat ggttcatgtg cgccttctcc cgaaccttgc cttggagctc tgtgctgcgt  
 960



gtctgggaca tgttcttctg tgaaggggtc aagatcatct tccgggtggg gctgggtgctg  
1020  
ctgaagcacg cgctggggtc ccctgagaag gtcaaagcct gccagggcca gtacgagacc  
1080  
atcgagcgac tgcggagcct cagccccaag atcatgcagg aggcctttct ggtccaggag  
1140  
gtggtggagt tgcccgtgac agagcgccag attgagcgcg aacacctcat tcagctgcgg  
1200  
cgctggcagg agaccggggg tgagctgcag tgccgctccc cgcccaggct gcatggtgcc  
1260  
aaggctatct tggatgcaga acctgggtccc cggcctgccc tacaaccttc accatccatc  
1320  
cgctgcccc tagatgcccc cctccctggc tccaaagcca agcccaagcc acccaagcag  
1380  
gcccagaagg agcagcggaa acagatgaag gggagagggc agctggagaa gccccagcc  
1440  
ccaaatcaag ccatggtggt ggccgctgca ggagatgcat gtccccaca gcatgtgccc  
1500  
ccgaaggact cagcccccaa ggactcagcc cctcaggatt tggtcccca ggtctcagcc  
1560  
caccaccgct cccaggagag cttgacgtcc caagagagtg aggacaccta cttgtaaccc  
1620  
tggcagctaa ggcctccagg gcgggggtctc catataacta cacggttcat gaactgacat  
1680  
tccacatcct gccaccctc tgagggccaa gctgcctggc cactgggctg ggctggagtc  
1740  
tggtggtcc aacacagatt ctgcctggtc caacacagat tctgcctgag cctccttatt  
1800  
tattttcttt acagtggcac tcaggctggc ccagccaggg caggcagaag ctagggcctg  
1860  
gggggtgggg cctccttcag cccctcctc ctgggggatg ctcccaggg ttaggggtgct  
1920  
ggtgtgaggg gaaaggggtg ggtgttcttt gtgtaaaata gaaacatggt tttgtacaga  
1980  
aataaacagc cttgtataga gaaaaaaaaa aaaaaaaaaa a  
2021

&lt;210&gt; 5444

&lt;211&gt; 438

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5444

Leu	Glu	Glu	Val	Pro	Leu	Glu	Val	Leu	Arg	Gln	Arg	Glu	Ser	Lys	Trp
1				5				10						15	
Leu	Asp	Met	Leu	Asn	Asn	Trp	Asp	Lys	Trp	Met	Ala	Lys	Lys	His	Lys
			20					25					30		
Lys	Ile	Arg	Leu	Arg	Cys	Gln	Lys	Gly	Ile	Pro	Pro	Ser	Leu	Arg	Gly
		35				40						45			
Arg	Ala	Trp	Gln	Tyr	Leu	Ser	Gly	Gly	Lys	Val	Lys	Leu	Gln	Gln	Asn
	50				55					60					
Pro	Gly	Lys	Phe	Asp	Glu	Leu	Asp	Met	Ser	Pro	Gly	Asp	Pro	Lys	Trp
65				70				75						80	
Leu	Asp	Val	Ile	Glu	Arg	Asp	Leu	His	Arg	Gln	Phe	Pro	Phe	His	Glu

				85					90					95			
Met	Phe	Val	Ser	Arg	Gly	Gly	His	Gly	Gln	Gln	Asp	Leu	Phe	Arg	Val		
			100					105					110				
Leu	Lys	Ala	Tyr	Thr	Leu	Tyr	Arg	Pro	Glu	Glu	Gly	Tyr	Cys	Gln	Ala		
		115					120					125					
Gln	Ala	Pro	Ile	Ala	Ala	Val	Leu	Leu	Met	His	Met	Pro	Ala	Glu	Gln		
		130				135					140						
Ala	Phe	Trp	Cys	Leu	Val	Gln	Ile	Cys	Glu	Lys	Tyr	Leu	Pro	Gly	Tyr		
145				150					155						160		
Tyr	Ser	Glu	Lys	Leu	Glu	Ala	Ile	Gln	Leu	Asp	Gly	Glu	Ile	Leu	Phe		
			165					170					175				
Ser	Leu	Leu	Gln	Lys	Val	Ser	Pro	Val	Ala	His	Lys	His	Leu	Ser	Arg		
		180					185						190				
Gln	Lys	Ile	Asp	Pro	Leu	Leu	Tyr	Met	Thr	Glu	Trp	Phe	Met	Cys	Ala		
	195					200						205					
Phe	Ser	Arg	Thr	Leu	Pro	Trp	Ser	Ser	Val	Leu	Arg	Val	Trp	Asp	Met		
210					215					220							
Phe	Phe	Cys	Glu	Gly	Val	Lys	Ile	Ile	Phe	Arg	Val	Gly	Leu	Val	Leu		
225				230					235						240		
Leu	Lys	His	Ala	Leu	Gly	Ser	Pro	Glu	Lys	Val	Lys	Ala	Cys	Gln	Gly		
			245					250					255				
Gln	Tyr	Glu	Thr	Ile	Glu	Arg	Leu	Arg	Ser	Leu	Ser	Pro	Lys	Ile	Met		
		260				265						270					
Gln	Glu	Ala	Phe	Leu	Val	Gln	Glu	Val	Val	Glu	Leu	Pro	Val	Thr	Glu		
	275					280						285					
Arg	Gln	Ile	Glu	Arg	Glu	His	Leu	Ile	Gln	Leu	Arg	Arg	Trp	Gln	Glu		
290					295					300							
Thr	Arg	Gly	Glu	Leu	Gln	Cys	Arg	Ser	Pro	Pro	Arg	Leu	His	Gly	Ala		
305				310						315					320		
Lys	Ala	Ile	Leu	Asp	Ala	Glu	Pro	Gly	Pro	Arg	Pro	Ala	Leu	Gln	Pro		
			325					330					335				
Ser	Pro	Ser	Ile	Arg	Leu	Pro	Leu	Asp	Ala	Pro	Leu	Pro	Gly	Ser	Lys		
		340					345						350				
Ala	Lys	Pro	Lys	Pro	Pro	Lys	Gln	Ala	Gln	Lys	Glu	Gln	Arg	Lys	Gln		
	355					360						365					
Met	Lys	Gly	Arg	Gly	Gln	Leu	Glu	Lys	Pro	Pro	Ala	Pro	Asn	Gln	Ala		
370					375						380						
Met	Val	Val	Ala	Ala	Ala	Gly	Asp	Ala	Cys	Pro	Pro	Gln	His	Val	Pro		
385				390					395						400		
Pro	Lys	Asp	Ser	Ala	Pro	Lys	Asp	Ser	Ala	Pro	Gln	Asp	Leu	Ala	Pro		
			405					410					415				
Gln	Val	Ser	Ala	His	His	Arg	Ser	Gln	Glu	Ser	Leu	Thr	Ser	Gln	Glu		
		420					425						430				
Ser	Glu	Asp	Thr	Tyr	Leu												
		435															

&lt;210&gt; 5445

&lt;211&gt; 1187

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5445

gcaaggtcaa gccagctcag gggacatggt gggcaggggg ctccagatcc cacggtgggc  
60

agaaaaggcg ggggtcggac tgacgccgtc ctgggccatg tccacgtctg gggctctgcag  
 120  
 gttccatctc cctttccact gtgcctaacc ttacatctat tacctacatc cagcaagaca  
 180  
 cgattttcca cgatgagttg attcgtaatt ccatttatgt gctagttttt agaattttcc  
 240  
 tgtgggtttt tttttactta cttatgattt taattttggt tgctttaaaa aaaacacatg  
 300  
 cataggaaaag aatgcttcct ttcatttcaa ttaaaaaaca caaattgctt ttttttaagc  
 360  
 aaaaattcat tgaggggggg gctcgcgttg taaaaagaaa atcagaccca ccgggatggc  
 420  
 tgtgatcaaa gagacagtaa caagggtagg gaggtggaga tgcgaaatcca aacacacaac  
 480  
 ttgtgcaaaag gtcaagtggc cacagccgcc acggaaaaca ggctggcggt tcctccgacg  
 540  
 ttcaacacac agtcgccacg ggacacagtg gttccacccc cagggtgtgca gcaatagaca  
 600  
 tcacagccca cgtccgcacg cagactcgga cagcgtgct cacagcccac gttcgcacgc  
 660  
 agactcagac atgcgtgctc acagcctcag tcatgacagc cagacagtgg aaacaaggca  
 720  
 ggtgggcctc ggctgctgag ggagcaacag cagaacggtg ctcagccctg gagaggaagg  
 780  
 acgcctggac cctggcccca caccacagca tccacaatgt ggtgccaacc aacaggccac  
 840  
 gcacacagag gccatgggcc agacgcttcc actgacacga aatgcccag agaggcacag  
 900  
 ccggcgacag aacggggacc cgtgtctgcc gccccaggag aggctgcagg ccggaaactg  
 960  
 gaggattaca gggcgcgagt gtcgttttag ggagatgaaa atgttctaaa attggctgtg  
 1020  
 gcaattgttg cacaactctg caaatatact aaaaaccact gaattgtaca tttcaaaatg  
 1080  
 ggtgaattgt acggtgcttg tattatacct caataaagct attttttaaag aaacaaaatt  
 1140  
 ttaaatacgt aaaaaaatca gaaagtgaaa tctggaatta acattcc  
 1187

&lt;210&gt; 5446

&lt;211&gt; 107

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5446

Met	Ala	Val	Ile	Lys	Glu	Thr	Val	Thr	Arg	Val	Gly	Arg	Trp	Arg	Cys
1				5					10					15	
Glu	Ser	Lys	His	Thr	Thr	Cys	Ala	Lys	Val	Lys	Trp	Pro	Gln	Pro	Pro
			20					25					30		
Arg	Lys	Thr	Gly	Trp	Arg	Phe	Leu	Arg	Arg	Ser	Thr	His	Ser	Arg	His
		35					40					45			
Gly	Thr	Gln	Trp	Phe	His	Pro	Gln	Val	Cys	Ser	Asn	Arg	His	His	Ser
	50					55				60					
Pro	Arg	Pro	His	Ala	Asp	Ser	Asp	Thr	Arg	Ala	His	Ser	Pro	Arg	Ser

65		70		75		80									
His	Ala	Asp	Ser	Asp	Met	Arg	Ala	His	Ser	Leu	Ser	His	Asp	Ser	Gln
		85				90								95	
Thr	Val	Glu	Thr	Arg	Gln	Val	Gly	Leu	Gly	Cys					
		100				105									

&lt;210&gt; 5447

&lt;211&gt; 1444

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5447

nngcaggtaa gtggtacat catatgccg ggacaatttg gcttgcttgc ccaagtttgc  
60  
aatttgctgc tttgtgaaag tgggcttcaa cacatacgtg atatectcca atgaggaatc  
120  
gatgatctca tagttgtact ttgcagtaag aagacttttc agatcaccaa acaaggagat  
180  
ggcggttgact ttctgtcttg gtttctgaat gctctgcact cagctctggg gggcacaaag  
240  
aagaaaaaga agactattgt gactgatgtt ttccaggggt ccatgaggat cttcactaaa  
300  
aagcttcccc atcctgatct gccagcagaa gaaaaagagc agttgctcca taatgacgag  
360  
taccaggaga caatggtgga gtccactttt atgtacctga cgctggacct tcctactgcc  
420  
cccctctaca aggacgagaa ggagcagctc atcattcccc aagtgccact cttcaacatc  
480  
ctggctaagt tcaatggcat cactgagaag gaatataaga cttacaagga gaactttctg  
540  
aagcgcttcc agcttaccaa gttgcctcca tatctaactt tttgtatcaa gagattcact  
600  
aagaacaact tctttgttga gaagaatcca actnattgtc aatttcctta ttacaaatgt  
660  
ggatctgaga gaatacttgt ctgaagaagt acaagcagta cacaagaata ccacctatga  
720  
cctcattgcc aacatcgtgc atgacggcaa gccctccgag ggctcctacc ggatccacgt  
780  
gcttcatcat gggacaggca aatgggtatga attacaagac ctccagggtga ctgacatcct  
840  
tccccagatg atcacactgt cagaggctta cattcagatt tggaagaggg gagataatga  
900  
tgaaaccaac cagcaggggg cttgaaggag gcgctctaggg ctttgctccc aagggtgtg  
960  
gctgatgatg gtaaataaga acacagaagc tgtagctgaa cacaggctgg ctggtgggct  
1020  
tcctaggcca gccagcttg tatgggttct ggctacacca gagcaccaag agcccacttg  
1080  
cctgggatgg cccacactg tcaactcagct gttctttgat ctttttttc tagattgatg  
1140  
ctcctttctc ccatgcattg agctccatc tagcttcagc agggcagaac ctttctccag  
1200  
atgtgtgtaa cttatgtctt gagtatctgg gagtagttga agaacagata attccttcca  
1260

aacatcaagc cttgggattc ttggagcaag cagaaagcca gtaacttcgc tctgttagag  
1320  
gtggaggatt ttcctatggg tccccccatt tcctgatttg tattttttaga tggattaaat  
1380  
agtctcctgt ttttaaacca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1440  
aaaa  
1444

<210> 5448  
<211> 189  
<212> PRT  
<213> Homo sapiens

<400> 5448  
Gly Ile Asp Asp Leu Ile Val Val Leu Cys Ser Lys Lys Thr Phe Gln  
1 5 10 15  
Ile Thr Lys Gln Gly Asp Gly Val Asp Phe Leu Ser Trp Phe Leu Asn  
20 25 30  
Ala Leu His Ser Ala Leu Gly Gly Thr Lys Lys Lys Lys Lys Thr Ile  
35 40 45  
Val Thr Asp Val Phe Gln Gly Ser Met Arg Ile Phe Thr Lys Lys Leu  
50 55 60  
Pro His Pro Asp Leu Pro Ala Glu Glu Lys Glu Gln Leu Leu His Asn  
65 70 75 80  
Asp Glu Tyr Gln Glu Thr Met Val Glu Ser Thr Phe Met Tyr Leu Thr  
85 90 95  
Leu Asp Leu Pro Thr Ala Pro Leu Tyr Lys Asp Glu Lys Glu Gln Leu  
100 105 110  
Ile Ile Pro Gln Val Pro Leu Phe Asn Ile Leu Ala Lys Phe Asn Gly  
115 120 125  
Ile Thr Glu Lys Glu Tyr Lys Thr Tyr Lys Glu Asn Phe Leu Lys Arg  
130 135 140  
Phe Gln Leu Thr Lys Leu Pro Pro Tyr Leu Ile Phe Cys Ile Lys Arg  
145 150 155 160  
Phe Thr Lys Asn Asn Phe Phe Val Glu Lys Asn Pro Thr Xaa Cys Gln  
165 170 175  
Phe Pro Tyr Tyr Lys Cys Gly Ser Glu Arg Ile Leu Val  
180 185

<210> 5449  
<211> 1359  
<212> DNA  
<213> Homo sapiens

<400> 5449  
tctccagagg aggaccagag gacttatggt ttccggggccc agagcgctga aatgaaggaa  
60  
cgaggggggca accagaccag tggcatcgac ttctttatta cccaagaacg gattgttttc  
120  
ctggacacac agcccatcct gagcccttct atcctagacc atctcatcaa taatgaccgc  
180  
aaactgcctc cagagtacaa ccttccccac acttacgttg aaatgcagtc actccagatt  
240

gctgccttcc ttttcacggt ctgccatgtg gggattnntg tccaggactg gttcacagac  
 300  
 ctcatgtctt acaggttcct gcagacagca gagatgggtga agccctccac cccatcccc  
 360  
 agccacgagt ccagcagctc atcgggctcc gatgaaggca ccgagtacta cccccaccta  
 420  
 gtcttcttcc agaacaagc tcgccgagag gacttctgtc ctcggaagct gcggcagatg  
 480  
 cacctgatga ttgaccagct catggccac tcccacctgc gttacaaggg aactctgtcc  
 540  
 atgttacaat gcaatgtctt cccggggctt ccacctgact tcttggaactc tgaggtcaac  
 600  
 ttattcctgg tacccttcat ggacagtga gacagagagtg aaaaccacc aagagcagga  
 660  
 cctgggtcca gccactctt ctccctgctg cctgggtatc gtggccaccc cagtttccag  
 720  
 tccttggtga gcaagctccg gagccaagt atgtccatgg cccggccaca gctgtcacac  
 780  
 acgatcctca ccgagaagaa ctgggtccac tacgctgccc ggatctggga tggggtgaga  
 840  
 aagtcctctg ctctggcaga gtacagccgc ctgctggcct gaggccaagg agaggaatgt  
 900  
 catgcagggg acctcctggg tccgcagtgt actgcgaggg agcacagatg tccatcccc  
 960  
 gctggggtgg agagcggcag caggcctgat ggatgagggg tcgtggcttc ccggcccaga  
 1020  
 gacatgaggt gtccagggcc agggccccc cctcagttg gggctgttcc gggggtgact  
 1080  
 gtgagcgatc ccacccaaa cctgagatgg ggcagcccgt cctgtgtcct ccacagggac  
 1140  
 aagcagtggg aggagtctga atggtcacca ggaagcccgg gctccatctt gacctcttt  
 1200  
 ttcagggaca ggagcaacag gccctcttc cctgactcta agcccttccc tgtaaggatga  
 1260  
 ggcaggtctt ggagagctct ttattggaac agatctgggtg gttcaaataa acacagtcac  
 1320  
 gcaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1359

&lt;210&gt; 5450

&lt;211&gt; 293

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5450

Ser	Pro	Glu	Glu	Asp	Gln	Arg	Thr	Tyr	Val	Phe	Arg	Ala	Gln	Ser	Ala
1				5					10					15	
Glu	Met	Lys	Glu	Arg	Gly	Gly	Asn	Gln	Thr	Ser	Gly	Ile	Asp	Phe	Phe
			20					25					30		
Ile	Thr	Gln	Glu	Arg	Ile	Val	Phe	Leu	Asp	Thr	Gln	Pro	Ile	Leu	Ser
			35				40					45			
Pro	Ser	Ile	Leu	Asp	His	Leu	Ile	Asn	Asn	Asp	Arg	Lys	Leu	Pro	Pro
	50					55					60				
Glu	Tyr	Asn	Leu	Pro	His	Thr	Tyr	Val	Glu	Met	Gln	Ser	Leu	Gln	Ile

```
<210> 5451
<211> 1184
<212> DNA
<213> Homo sapiens
```

```
<400> 5451
ncacgccttg ctaaattttg tatttttggt agagacgggg ttccacgtgt tggccaggct
60
ggtctcgaac tgctgacctc aagtgatctg tccgcctcag cctcccaaag tgctgggatt
120
acagatgtga gccatcatgc ccggctaatt tttttgtatt ttagtagaga cagggtttca
180
ccgtgttagc caggatgggc ttgatctect gaccttgtga tccaccagcc tcagcctccc
240
aaagtgcctg gattacaggc gtgagccact gtgcccggcc aagaattttt ttatcgataa
300
catagtgagc tctctgcctc ttcggaacga tgtccacttt gcttatgata aaccaagca
360
ggactcttct ctccctggac gcctctcccc tgggtctggaa tcttccagtt ctgccagaat
420
tggccttttc cagatgctgc aaacttccag ttgaaccctt ttttctgtgt ggcccttggg
480
gctgcgagac caaaatccat gagttctgtg taccctagac ctttggaagg tgagagcagg
540
```

gccctgagaa aaggcagcca cctcctctcc ctggctgaac ccctgccacc ctactcctca  
600  
ccagaattgt cagtggcctt tcaccacagt ggtecttctt gcctgagccc tgcactgtcc  
660  
cagaccacac agaagtctgg tcacctctgg gcgcctggga tggtcaccga agagaagcac  
720  
gctgtccccg tctctcctgg cttctgccag aaaatcgaac aagtgcattt aacacactgt  
780  
tactgccgaa gcctgaaact cccaggactt gtccttgatc cttccagaaa ccaccaggtc  
840  
cggcacttgg agccccccgg agagggacct cccagccgag ccctcaaaga actccatgaa  
900  
atcaggaact gcttgatgaa atgtatctcc ttgtacctgg aagatgaagc ccaaacaccc  
960  
acacctctgt ctccccagg gctcgggatg tctccagcag cccggccacg cagcttccca  
1020  
ggtgggctcg gggaggtggg agcagggacc atctctgtcc cctccaccct cactccatcc  
1080  
acctcggaga ccacctccc ccagccagat acggaataaa actacagacg cagacgtcgg  
1140  
aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa  
1184

&lt;210&gt; 5452

&lt;211&gt; 206

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5452

Met	Ser	Ser	Val	Tyr	Pro	Arg	Pro	Leu	Glu	Gly	Glu	Ser	Arg	Ala	Leu
1			5					10						15	
Arg	Lys	Gly	Ser	His	Leu	Leu	Ser	Leu	Ala	Glu	Pro	Leu	Pro	Pro	Tyr
			20					25						30	
Ser	Ser	Pro	Glu	Leu	Ser	Val	Ala	Phe	His	His	Ser	Gly	Pro	Ser	Cys
			35				40					45			
Leu	Ser	Pro	Ala	Leu	Ser	Gln	Thr	Thr	Gln	Lys	Ser	Gly	His	Leu	Trp
			50			55					60				
Ala	Pro	Gly	Met	Val	Thr	Glu	Glu	Lys	His	Ala	Val	Pro	Val	Ser	Pro
65					70					75				80	
Gly	Phe	Cys	Gln	Lys	Ile	Glu	Gln	Val	Gln	Leu	Thr	His	Cys	Tyr	Cys
			85					90						95	
Arg	Ser	Leu	Lys	Leu	Pro	Gly	Leu	Val	Leu	Asp	Pro	Ser	Arg	Asn	His
			100					105						110	
Gln	Val	Arg	His	Leu	Glu	Pro	Pro	Gly	Glu	Gly	Pro	Pro	Ser	Arg	Ala
			115					120						125	
Leu	Lys	Glu	Leu	His	Glu	Ile	Arg	Asn	Cys	Leu	Met	Lys	Cys	Ile	Ser
			130				135						140		
Leu	Tyr	Leu	Glu	Asp	Glu	Ala	Gln	Thr	Pro	Thr	Pro	Leu	Ser	Pro	Pro
145					150					155					160
Gly	Leu	Gly	Met	Ser	Pro	Ala	Ala	Arg	Pro	Arg	Ser	Phe	Pro	Gly	Gly
			165					170						175	
Leu	Gly	Glu	Val	Gly	Ala	Gly	Thr	Ile	Ser	Val	Pro	Ser	Thr	Leu	Thr
			180					185						190	
Pro	Ser	Thr	Ser	Glu	Thr	Thr	Leu	Pro	Gln	Pro	Asp	Thr	Glu		



195 200 205

<210> 5453  
<211> 1974  
<212> DNA  
<213> Homo sapiens

<400> 5453  
ntcggcagge cggccatgga gccaggcagc gtggagaacc tgtccatcgt gtaccggagc  
60  
cgcgacttcc tgggtggtcaa caagcactgg gacgttcgca ttgacagcaa ggcgtggcgg  
120  
gagactctga ccctgcagaa gcagctgcgg taccgctttc ccgagctggc cgacctgac  
180  
acctgctacg gggttcaggtt ctgccaccag ctggatttct ccaccagcgg ggcgtgtg  
240  
gtggccctaa acaaggcagc cgccggcagc gcgtacaggt gcttcaagga gcggcgctg  
300  
accaaggctt acctggcatt gctgcggggg cacatccagg agagccgggt aaccatcagc  
360  
catgccattg gcaggaacag cacggagggc cgggcccaca ccatgtgcat cgagggtc  
420  
caggggtgtg caggttgtga gaacccaaag ccaagcctca cagatctcgt ggttctgga  
480  
cacgggctgt acgcaggcga tcctgtctcc aaagtgtgct tgaagccgct cacgggccc  
540  
acacaccagc tgcgcgtgca ctgcagtgcc ctgggccacc ccgtgggtggg cgacctgac  
600  
tacggagaag tctcgggccg ggaggaccgg ccgttcagaa tgatgctgca cgctttctac  
660  
ctgcgcatcc ccacggacac cgagtgtgtg gaggtctgca cgcctgacct ctccctgccc  
720  
tccttgatg cctgctggag cccccacaca ctgctgcagt cgctggacca gctcgtgcag  
780  
gccttacggg ccacccccga ccctgacccc gaggataggg gcccaggcc aggcagcccc  
840  
tcgcactcc tgctgggccc cggccggcct cctccacccc caaccaagcc ccctgagact  
900  
gaggcacagc ggggcccctg cctgcagtgg ctgtcggagt ggacgctgga accggacagc  
960  
tgagagccgt ggggctgggg cagggggtgt cagctgcaca gcgggactct agggagatgg  
1020  
gcgagcgagc gtctgctcac tggctctggg gcctcgaggt gccaggcagc atcaggccca  
1080  
ctgggttgcc ccggccaggc ctgcgaggaa gggctgaggt ggggccggca gggggcgcca  
1140  
ggcagccgtg atcacaggtg acgaccgcac cgcggccgtg ggactgatgc gggatcccga  
1200  
gggccttctt gccacatgc cccgggagaa accgaggccc ctccctctc ctggaacagc  
1260  
ttccggctct caagcgtcac cccaggggcg tcagttttac ggactcaagg tcacctcagg  
1320  
aagaggcagg gccaggtttt gggataggct ttgcctccag gatgggctgc tcctgggcct  
1380

ggtgagctac tgcccccaac ctaccctcta gaggggctgg gaagggccgt tctgggctca  
1440  
cctggcctgg gagaccatc tggtcctgc gtcctctgcc cctcactgct ctgtgcagat  
1500  
cctgtcgccc tcagctgcct cctcccgaga cctaattggc cctgctgggc tcgagtctgc  
1560  
aggccccgct gcgtgtgcct tggcctcact gtaccagtgg ttccctctct gcccgattc  
1620  
tgagctcagt gtggtgtttg gtgcacaggg gttggtcagg ggccatggcc aaggccctgc  
1680  
cacgcacgcc catccctcag atccactgtg agcaccaacc tgctgcagtc tcttgggccc  
1740  
ctgctggcag ctctgccacg tcaccgcctg cctggctccc acacagccat gcattgtcac  
1800  
tctgcctccg ggaccccagc ttgggagctg tgggtctgcc aggtcccacc tcctctgtcc  
1860  
cccatgccac aacctgggct cctggctaca gcagggtccc agggactcca aataaatgtt  
1920  
cagtgactgg caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa  
1974

&lt;210&gt; 5454

&lt;211&gt; 320

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5454

Xaa	Gly	Arg	Pro	Ala	Met	Glu	Pro	Gly	Ser	Val	Glu	Asn	Leu	Ser	Ile
1				5					10					15	
Val	Tyr	Arg	Ser	Arg	Asp	Phe	Leu	Val	Val	Asn	Lys	His	Trp	Asp	Val
			20					25					30		
Arg	Ile	Asp	Ser	Lys	Ala	Trp	Arg	Glu	Thr	Leu	Thr	Leu	Gln	Lys	Gln
			35				40					45			
Leu	Arg	Tyr	Arg	Phe	Pro	Glu	Leu	Ala	Asp	Pro	Asp	Thr	Cys	Tyr	Gly
			50			55				60					
Phe	Arg	Phe	Cys	His	Gln	Leu	Asp	Phe	Ser	Thr	Ser	Gly	Ala	Leu	Cys
65				70					75					80	
Val	Ala	Leu	Asn	Lys	Ala	Ala	Ala	Gly	Ser	Ala	Tyr	Arg	Cys	Phe	Lys
			85					90					95		
Glu	Arg	Arg	Val	Thr	Lys	Ala	Tyr	Leu	Ala	Leu	Leu	Arg	Gly	His	Ile
			100					105					110		
Gln	Glu	Ser	Arg	Val	Thr	Ile	Ser	His	Ala	Ile	Gly	Arg	Asn	Ser	Thr
			115				120					125			
Glu	Gly	Arg	Ala	His	Thr	Met	Cys	Ile	Glu	Gly	Ser	Gln	Gly	Val	Ala
			130			135					140				
Gly	Cys	Glu	Asn	Pro	Lys	Pro	Ser	Leu	Thr	Asp	Leu	Val	Val	Leu	Glu
145				150						155				160	
His	Gly	Leu	Tyr	Ala	Gly	Asp	Pro	Val	Ser	Lys	Val	Leu	Leu	Lys	Pro
			165					170						175	
Leu	Thr	Gly	Arg	Thr	His	Gln	Leu	Arg	Val	His	Cys	Ser	Ala	Leu	Gly
			180				185						190		
His	Pro	Val	Val	Gly	Asp	Leu	Thr	Tyr	Gly	Glu	Val	Ser	Gly	Arg	Glu
			195			200						205			
Asp	Arg	Pro	Phe	Arg	Met	Met	Leu	His	Ala	Phe	Tyr	Leu	Arg	Ile	Pro

210	215	220
Thr Asp Thr Glu Cys Val Glu Val Cys Thr Pro Asp Pro Phe Leu Pro		
225	230	235
Ser Leu Asp Ala Cys Trp Ser Pro His Thr Leu Leu Gln Ser Leu Asp		240
	245	250
Gln Leu Val Gln Ala Leu Arg Ala Thr Pro Asp Pro Asp Pro Glu Asp		255
	260	265
Arg Gly Pro Arg Pro Gly Ser Pro Ser Ala Leu Leu Pro Gly Pro Gly		270
	275	280
Arg Pro Pro Pro Pro Thr Lys Pro Pro Glu Thr Glu Ala Gln Arg		285
	290	295
Gly Pro Cys Leu Gln Trp Leu Ser Glu Trp Thr Leu Glu Pro Asp Ser		300
305	310	315
		320

&lt;210&gt; 5455

&lt;211&gt; 975

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5455

```

nggtgaggct caaactctct ctttctcctt gtcataacta ttggtttaca gtctttattt
60
gtttaaaagt aaagcacatt gtatgtatatt atttggcaat acatgaggcc attaaaaccc
120
tgagcctaag gtaccacagt tagtctcatt tgcctcttgt cctgtgaact ccacttagaa
180
tgtcattgaa cttgggcaga cataattcta gtgtctgttc caaacgcact gtgtcacaga
240
agctagaatt accattagag gcacaaaacc ctgagaatac acaagggggc acgcttccag
300
tagatgtgtt ggggaaggag gagggcagag gggacagggg acaggattca gctttgtggt
360
gggtcctgag ggttcttacc aggggtagcc aggatctggg aaacagatca gcgactctag
420
tctgaagtgg ctgcctgggt cgggggctgc cttcagcaag attcaggcag gagagacgga
480
aatagccacc ttccaggcgt gagtcctgga gataaaaatg gattttaacc taggactgcc
540
gggagctggc cctccgcggc tgctcagact agggctgtgt gtgctggctc tcgctgttt
600
ccggtgtcta actggcttgt ttctctttat ggcttggctt cattccgacc tgggggtggg
660
ccacatccaa cccactgccc actggctgtc cgtctggcct gccccgcggt tccaaccaca
720
gtggtgaagc agcgcttgca gatgtacaac tcgcagcacc ggtcagcaat cagctgcac
780
cggacggtgt ggaggaccga ggggttgggg gccttctacc ggagctacac cacgcagctg
840
accatgaaca tccccttcca gtccatccac ttcacacct atgagttcct gcaggagcag
900
gtcaaccccc accggaccta caaccgcag tcccacatca tctcaggcgg gctggccggg
960
gccctcgccg cggcg
975

```

<210> 5456  
<211> 149  
<212> PRT  
<213> Homo sapiens

<400> 5456  
Pro Arg Thr Ala Gly Ser Trp Pro Ser Ala Ala Ala Gln Thr Arg Ala  
1 5 10 15  
Val Cys Ala Gly Ser Arg Leu Phe Pro Val Ser Asn Trp Leu Val Ser  
20 25 30  
Leu Tyr Gly Leu Ala Ser Phe Arg Pro Gly Val Gly Pro His Pro Thr  
35 40 45  
His Cys Pro Leu Ala Val Arg Leu Ala Cys Pro Ala Val Pro Thr Thr  
50 55 60  
Val Val Lys Gln Arg Leu Gln Met Tyr Asn Ser Gln His Arg Ser Ala  
65 70 75 80  
Ile Ser Cys Ile Arg Thr Val Trp Arg Thr Glu Gly Leu Gly Ala Phe  
85 90 95  
Tyr Arg Ser Tyr Thr Thr Gln Leu Thr Met Asn Ile Pro Phe Gln Ser  
100 105 110  
Ile His Phe Ile Thr Tyr Glu Phe Leu Gln Glu Gln Val Asn Pro His  
115 120 125  
Arg Thr Tyr Asn Pro Gln Ser His Ile Ile Ser Gly Gly Leu Ala Gly  
130 135 140  
Ala Leu Ala Ala Ala  
145

<210> 5457  
<211> 448  
<212> DNA  
<213> Homo sapiens

<400> 5457  
cgcagcggga gcgtgggcag ccaggcgggtg gcgcggagga tggatgggga cagccgagat  
60  
ggcggcggcg gcaaggacgc caccgggtcg gaggactacg agaacctgcc gactagcgcc  
120  
tccgtgtcca cccacatgac agcaggagcg atggccggga tcctggagca ctcggtcatg  
180  
taccgggtgg actcggtgaa ggtaatgtgg actgtggagc tctgtgctgg tcactttcaa  
240  
ccctgaacct gatgctactt attttgcagt tctaagtga aagtcggcct ggtggatgct  
300  
tcccattata atattaaatt tgcttcttcg tgaggtcaca cctcacatcc ccagtgtcac  
360  
tttaataact agtggttttt acatgggtggg ccatgaccca ttagtggact ctgcatttaa  
420  
aaataaataa ataaataaaa gaaaaaaaa  
448

<210> 5458  
<211> 81  
<212> PRT

<213> Homo sapiens

<400> 5458

```

Arg Ser Gly Ser Val Gly Ser Gln Ala Val Ala Arg Arg Met Asp Gly
 1           5           10          15
Asp Ser Arg Asp Gly Gly Gly Gly Lys Asp Ala Thr Gly Ser Glu Asp
 20          25          30
Tyr Glu Asn Leu Pro Thr Ser Ala Ser Val Ser Thr His Met Thr Ala
 35          40          45
Gly Ala Met Ala Gly Ile Leu Glu His Ser Val Met Tyr Pro Val Asp
 50          55          60
Ser Val Lys Val Met Trp Thr Val Glu Leu Cys Ala Gly His Phe Gln
65          70          75          80
Pro

```

<210> 5459

<211> 1468

<212> DNA

<213> Homo sapiens

<400> 5459

```

nnccgcatgg cgtcaggcgc cgcggccccc gggaggtggc tcccacttta agaagtgaag
60
ttttgcgccc ctccccctcc ctgcccacct cctgcagcct cctgcgcccc gccgagctgg
120
cggatggagc tgcgcagcgg gagcgtgggc agccaggcgg tggcgcggag gatggatggg
180
gacagccgag atggcggcgg cggcaaggac gccaccgggt cggaggacta cgagaacctg
240
ccgactagcg cctccgtgtc caccacatg acagcaggag cgatggccgg gatcctggag
300
cactcgggtc tgtaccgggt ggactcgggt aagacacgaa tgcagagttt gagtccagat
360
cccaaagccc agtacacaag tatctacgga gccctcaaga aaatcatgca gaccgaaggc
420
ttctggaggc ctttgcgagg cgtcaacgtc atgatcatgg gtgcagggcc agcccatgcc
480
atgtattttg cctgctatga aaacatgaaa aggactttta atgacgtttt ccaccaccaa
540
ggaaacagcc acctagccaa cggatatttg aaagcgtttg tctggagtta gaaagttctc
600
ttcttcaaca cgtccctccc cagggtgttc ctccctgtga cccagccgcc tcgacttcgg
660
cccgttgct cacgaataaa gaactcagag ttgtgtgtgc aatgcacacc cagacacacg
720
cacgcacaca cacgcgcgcg cacacacatg cttttttctg ttccctccg ctttctgaag
780
cctgggggaga aatcagtgc agaggtgttt tggttttatt gttatgtggg ttttcttttg
840
tatttttttt gtttgttttg tttttaaaca ttcaaagca attaatgac agacatagga
900
gaaaccctga atagaaacaa aacttttgaa tgctggattc aaaaaaaaaa aaaagttatc
960

```

tggacagctt ctttgagact atttaaaaac tggatcaaca ggtctctaca acgccaagat  
1020  
ctaactaagc tttaaaaggt caagaagttt tatggctgac aaaggactcg cgcaacgcag  
1080  
aaggcctttc ccaccttaag cttccgggga tctgggaatt ttaccccat tctcttctgt  
1140  
ttgtctgagt ctcctctctc tgcaagcaag ggctgaaatc attttgtttg ggatagctgg  
1200  
gagtatggcc accctgctcc acgatgcggt aatgaatcca gcagaaggta atgtttcatg  
1260  
gtcccagggg ggggcagtag gggatgtgca aaggggcaca aaaaaatggg tgtgggagag  
1320  
tggagaggac tgaaggtggg cagacggctc ctagtctcca gtcagagcag acaggagaat  
1380  
tgaatttttt actacgttat caaaggcctc aagaaaggac gtgaacataa gagtttttgg  
1440  
tattcctgtg ctccggagcta cttcaaag  
1468

&lt;210&gt; 5460

&lt;211&gt; 155

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5460

Met	Glu	Leu	Arg	Ser	Gly	Ser	Val	Gly	Ser	Gln	Ala	Val	Ala	Arg	Arg
1				5				10						15	
Met	Asp	Gly	Asp	Ser	Arg	Asp	Gly	Gly	Gly	Gly	Lys	Asp	Ala	Thr	Gly
			20					25					30		
Ser	Glu	Asp	Tyr	Glu	Asn	Leu	Pro	Thr	Ser	Ala	Ser	Val	Ser	Thr	His
		35				40					45				
Met	Thr	Ala	Gly	Ala	Met	Ala	Gly	Ile	Leu	Glu	His	Ser	Val	Met	Tyr
	50				55					60					
Pro	Val	Asp	Ser	Val	Lys	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro
65					70				75					80	
Lys	Ala	Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Gln
			85					90					95		
Thr	Glu	Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met
		100					105					110			
Gly	Ala	Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met
	115					120					125				
Lys	Arg	Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu
	130				135					140					
Ala	Asn	Gly	Ile	Leu	Lys	Ala	Phe	Val	Trp	Ser					
145					150				155						

&lt;210&gt; 5461

&lt;211&gt; 1725

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5461

nnagtccgcg ccgcaggtgg tgcttgtctg cagagtcatg acctctttcc gcttggccct  
60

catccagctt cagatttctt ccatcaaatt agataacgtc actcgcgctt gtagcttcat  
120  
ccgggaggca gcaacgcaag gagccaaaat agtttctttg ccggaatgct ttaattctcc  
180  
atatggagcg aaatattttc ctgaatatgc agagaaaatt cctgggtgaat ccacacagaa  
240  
gctttctgaa gtagcaaagg aatgcagcat atatctcatt ggaggtaact tcctaccac  
300  
aaggctctat ccctgaagag gatgctggga aattatataa cacctgtgct gtgtttgggc  
360  
ctgatggaac ttactagca aagtatagaa agatccatct gtttgacatt gatgttcctg  
420  
gaaaaattac atttcaagaa tctaaaacat tgagtccggg tgatagtttc tccacatttg  
480  
atactcgat gtaccagata agtttgctc tttagcaatc tcagtagaag acaatcaggt  
540  
atttatttct tttttgtctc tctccgattt cttcacataa cctaactgaa agaccataag  
600  
tgagaaaggc agagaatcat cacagatctg gaaagttcgg gcttatttga gaactaagga  
660  
tttgacacga ttttgccctt tgatttgatt gtagcttcct gttacggctt ccagagtata  
720  
cctattaggc tacagttgag tacctcccat ctagataata agcattcaat tagaatgaat  
780  
ttctcatctt tactccgctg atgtaaatga tgtctttatg agatgaagtc caagtaggaa  
840  
tgagcttgta aattatctct gtccctcaggt cctgtgttaa tttatccctg tcagtgtttt  
900  
gtgatcatta tgtcatggag gatttccctt gccacaccat gctgtaggga gtttaactttt  
960  
catttgtgca ttttctgttt ggaaacagct tactgcagag tgggtctggg catctgctac  
1020  
gacatgcggt ttgcagagct tgcacaaatc tacgcacaga gaggctgcca gctgttggtta  
1080  
tatccaggag cttttaatct gaccactgga ccagcccatt gggagttact tcagcgaagc  
1140  
cgggctgttg ataatcaggt gtatgtggcc acagcctctc ctgcccggga tgacaaagcc  
1200  
tcctatgttg cctggggaca cagcacgtg gtgaaccctt ggggggaggt tctagccaaa  
1260  
gctggcacag aagaagcaat cgtgtattca gacatagacc tgaagaagct ggctgaaata  
1320  
cgccagcaaa tccccgtttt tagacagaag cgatcagacc tctatgctgt ggagatgaaa  
1380  
aagccctaaa gtttatgttt ctaatgtgtc acagaatagg acgatatgat tctacaacat  
1440  
aatcaactcc ctattaaatt ctttaatgaa gatTTTTTTT ttaattcggc cttgtccttc  
1500  
ctaggttctc tattgagatg agaaagcctc attatgctga cattttccac gccacattaa  
1560  
atagttaaaa aggatgcagc ctggagccag agagcagaaa gctgggctgg ttctgaagct  
1620  
tcttccatac ttaagttgcc tccaagcagt ttgtgaaagt atcagatcct ggtatcctgg  
1680

tgattgattc acctaataata aatatatttg tgccatgaac ctctt  
1725

<210> 5462  
<211> 159  
<212> PRT  
<213> Homo sapiens

<400> 5462  
Met Ser Trp Arg Ile Ser Pro Ala Thr Pro Cys Cys Arg Glu Leu Thr  
1 5 10 15  
Phe His Leu Cys Ile Phe Cys Leu Glu Thr Ala Tyr Cys Arg Val Gly  
20 25 30  
Leu Gly Ile Cys Tyr Asp Met Arg Phe Ala Glu Leu Ala Gln Ile Tyr  
35 40 45  
Ala Gln Arg Gly Cys Gln Leu Leu Val Tyr Pro Gly Ala Phe Asn Leu  
50 55 60  
Thr Thr Gly Pro Ala His Trp Glu Leu Leu Gln Arg Ser Arg Ala Val  
65 70 75 80  
Asp Asn Gln Val Tyr Val Ala Thr Ala Ser Pro Ala Arg Asp Asp Lys  
85 90 95  
Ala Ser Tyr Val Ala Trp Gly His Ser Thr Val Val Asn Pro Trp Gly  
100 105 110  
Glu Val Leu Ala Lys Ala Gly Thr Glu Glu Ala Ile Val Tyr Ser Asp  
115 120 125  
Ile Asp Leu Lys Lys Leu Ala Glu Ile Arg Gln Gln Ile Pro Val Phe  
130 135 140  
Arg Gln Lys Arg Ser Asp Leu Tyr Ala Val Glu Met Lys Lys Pro  
145 150 155

<210> 5463  
<211> 792  
<212> DNA  
<213> Homo sapiens

<400> 5463  
nntttttttt ttttttaaag cctggattgt aaccagattt tcttttttcc cccttctcag  
60  
ctgtagatat gatattctct ttcagggccc cagcttaagg gcaaagtgag ttaatgtgta  
120  
gacaaaggcg agggacaaga gagagttaac atctagacag tggaaaaagc catggtgtgt  
180  
ggtttctggg aaccaccaac acttgcaggt ttagcttttt cccaggggtg actacaagaa  
240  
agaaaacat gtttttgcaa gattaaaatg tggttgagtg tgcctaaatt aaccatcccc  
300  
atttttatca tatttccacc atcacttcag ggttttaaga gtcagtgtc acctgggcgg  
360  
agctggtagt acattttgct tcttagaaag ctaagtcctg ggttccgtct gatttttaggt  
420  
tccaggaact tctgagaac acccgatcgc agagggtaat tttctggagt ttgttttgca  
480  
gggatagctg ggagtatggc caccctgctc cacgatgcgg taatgaatcc agcagaagtg  
540



gtgaagcagc gcttgagat gtacaactcg cagcaccggt cagcaatcag ctgcatccgg  
600  
acgggtgtgga ggaccgaggg gttggggggc ttctaccgga gctacaccac gcagctgacc  
660  
atgaacatcc ccttccagtc catccacttc atcacctatg agttcctgca ggagcaggtc  
720  
aacccccacc ggacctacaa cccgcagtc cacaatcatct caggcgggct ggccggggcc  
780  
ctcgccgagg cc  
792

<210> 5464  
<211> 111  
<212> PRT  
<213> Homo sapiens

<400> 5464  
Phe Ser Gly Val Cys Phe Ala Gly Ile Ala Gly Ser Met Ala Thr Leu  
1 5 10 15  
Leu His Asp Ala Val Met Asn Pro Ala Glu Val Val Lys Gln Arg Leu  
20 25 30  
Gln Met Tyr Asn Ser Gln His Arg Ser Ala Ile Ser Cys Ile Arg Thr  
35 40 45  
Val Trp Arg Thr Glu Gly Leu Gly Ala Phe Tyr Arg Ser Tyr Thr Thr  
50 55 60  
Gln Leu Thr Met Asn Ile Pro Phe Gln Ser Ile His Phe Ile Thr Tyr  
65 70 75 80  
Glu Phe Leu Gln Glu Gln Val Asn Pro His Arg Thr Tyr Asn Pro Gln  
85 90 95  
Ser His Ile Ile Ser Gly Gly Leu Ala Gly Ala Leu Ala Ala Ala  
100 105 110

<210> 5465  
<211> 497  
<212> DNA  
<213> Homo sapiens

<400> 5465  
tttgacggtc ttcagggttta tttcttaaata caattaggaa ataaaaccac agtgcccagg  
60  
aaagttcaca tgagacgcca cgggtgtctct tgccatggcc ccaccactcc agggggccagg  
120  
gggtgctgct ggagggagga cagacggaca ggcggcctgg gtggccggcc ccagaaaggc  
180  
tggcgtggat gttcgagatg agccaccagc gaagccagta gggatgtctg ggccgtcctg  
240  
gtgggattgt ctgggacatc gccaccaaca cgggtgtcaga gccatcagtg gggacatcgg  
300  
agggggccacc accaggtggg gtatatattcaa caggctagaa cccctgaggc ttgagaggcc  
360  
aacccccggc aggagacctc ccctgacccc tctgctgcct ctctgtggg accctccagt  
420  
agacacacca gatgaggaca cccaggaggc ctctccag gacaggaggc agctgctgg  
480

gcagccacgc agtgcac  
497

<210> 5466  
<211> 134  
<212> PRT  
<213> Homo sapiens

<400> 5466  
Met Ala Pro Pro Leu Gln Gly Pro Gly Gly Ala Ala Gly Gly Arg Thr  
1 5 10 15  
Asp Gly Gln Ala Ala Trp Val Ala Gly Pro Arg Lys Ala Gly Val Asp  
20 25 30  
Val Arg Asp Glu Pro Pro Ala Lys Pro Val Gly Met Ser Gly Pro Ser  
35 40 45  
Trp Trp Asp Cys Leu Gly His Arg His Gln His Gly Val Arg Ala Ile  
50 55 60  
Ser Gly Asp Ile Gly Gly Ala Thr Thr Arg Trp Gly Ile Phe Asn Arg  
65 70 75 80  
Leu Glu Pro Leu Arg Leu Glu Arg Pro Thr Pro Gly Arg Arg Pro Pro  
85 90 95  
Leu Thr Pro Leu Leu Pro Leu Leu Trp Asp Pro Pro Val Asp Thr Pro  
100 105 110  
Asp Glu Asp Thr Gln Glu Ala Ser Ser Gln Asp Arg Arg Gln Leu Pro  
115 120 125  
Gly Gln Pro Arg Ser Ala  
130

<210> 5467  
<211> 1329  
<212> DNA  
<213> Homo sapiens

<400> 5467  
gtcgaatatc catgcagccg cgccgcccgc ctggagtgcg ggaagcccag tggaaggggg  
60  
tcccggggagc cggctgcgat ggacgcccgc ttggaaccct tcccggccga caggctgttc  
120  
cccggatcca gcttccctgga cttgggggat ctgaacgagt cggacttcct caacaatgcg  
180  
cactttcctg agcacctgga ccactttacg gagaacatgg aggacttctc caatgacctg  
240  
ttcagcagct tctttgatga ccctgtgctg gatgagaaga gccctctatt ggacatggaa  
300  
ctggactccc ctacgccagg catccaggcg gagcacagct actccctgag cggcgactca  
360  
gcgccccaga gcccccttgt gcccatcaag atggaggaca ccaccaaga tgcagagcat  
420  
ggagcatggg cgctgggaca caaactgtgc tccatcatgg tgaagcagga gcagagcccc  
480  
gagctgcccc tggaccctct ggctgcccc tcggccatgg ctgccgcggc cgccatggcc  
540  
accacccgc tgctgggcct cagccccttg tccaggctgc ccaccccca ccaggcccc  
600

ggagagatga ctcagctgcc agtgatcaaa gcagagcctc tggaggtgaa ccagttcctc  
 660  
 aaagtgcacac cggaggacct ggtgcagatg cctccgacgc cccccagcag ccatggcagt  
 720  
 gacagcgacg gctcccagag tccccgctct ctgccccctt ccagccctgt caggcccatg  
 780  
 gcgcgctcct ccacggccat ctccagctcc ccactcctca cggctcctca taaattacag  
 840  
 gggacatcag gccctctggt cctgacagag gaggagaaga ggaccctgat tgctgagggc  
 900  
 tatcccatcc ccaccaaact cccctcacc aaatcagagg agaaggcctt gaagaaaatt  
 960  
 cggaggaaga tcaagaataa gatttctgct caggaaagta ggagaaagaa gaaagaatac  
 1020  
 atggacagcc tggagaaaaa agtggagtct tgttcaactg agaacttgga gcttcggaag  
 1080  
 aaggtagaga ccctggagaa tgccaacagc ttctccagcg ggatccagcc actcctctgt  
 1140  
 tccctgattg gcctggagaa tcccacctga cccccaccc caccctctg tctctggctg  
 1200  
 gggttccttt ctggcccaaa gtaggtccaa gccctttag ttatttcgcc acctgctgta  
 1260  
 cattgtggga actgcaaccc ctacgtgcc gtttgggtgg agagagatta aacatttgcc  
 1320  
 caccaaaaa  
 1329

&lt;210&gt; 5468

&lt;211&gt; 363

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5468

Met	Asp	Ala	Val	Leu	Glu	Pro	Phe	Pro	Ala	Asp	Arg	Leu	Phe	Pro	Gly
1				5					10					15	
Ser	Ser	Phe	Leu	Asp	Leu	Gly	Asp	Leu	Asn	Glu	Ser	Asp	Phe	Leu	Asn
			20					25					30		
Asn	Ala	His	Phe	Pro	Glu	His	Leu	Asp	His	Phe	Thr	Glu	Asn	Met	Glu
			35				40					45			
Asp	Phe	Ser	Asn	Asp	Leu	Phe	Ser	Ser	Phe	Phe	Asp	Asp	Pro	Val	Leu
			50			55					60				
Asp	Glu	Lys	Ser	Pro	Leu	Leu	Asp	Met	Glu	Leu	Asp	Ser	Pro	Thr	Pro
65					70				75					80	
Gly	Ile	Gln	Ala	Glu	His	Ser	Tyr	Ser	Leu	Ser	Gly	Asp	Ser	Ala	Pro
			85					90						95	
Gln	Ser	Pro	Leu	Val	Pro	Ile	Lys	Met	Glu	Asp	Thr	Thr	Gln	Asp	Ala
			100					105					110		
Glu	His	Gly	Ala	Trp	Ala	Leu	Gly	His	Lys	Leu	Cys	Ser	Ile	Met	Val
			115				120					125			
Lys	Gln	Glu	Gln	Ser	Pro	Glu	Leu	Pro	Val	Asp	Pro	Leu	Ala	Ala	Pro
			130			135					140				
Ser	Ala	Met	Ala	Ala	Ala	Ala	Met	Ala	Thr	Thr	Pro	Leu	Leu	Gly	
145				150				155						160	
Leu	Ser	Pro	Leu	Ser	Arg	Leu	Pro	Ile	Pro	His	Gln	Ala	Pro	Gly	Glu

165 170 175  
 Met Thr Gln Leu Pro Val Ile Lys Ala Glu Pro Leu Glu Val Asn Gln  
 180 185 190  
 Phe Leu Lys Val Thr Pro Glu Asp Leu Val Gln Met Pro Pro Thr Pro  
 195 200 205  
 Pro Ser Ser His Gly Ser Asp Ser Asp Gly Ser Gln Ser Pro Arg Ser  
 210 215 220  
 Leu Pro Pro Ser Ser Pro Val Arg Pro Met Ala Arg Ser Ser Thr Ala  
 225 230 235 240  
 Ile Ser Ser Ser Pro Leu Leu Thr Ala Pro His Lys Leu Gln Gly Thr  
 245 250 255  
 Ser Gly Pro Leu Val Leu Thr Glu Glu Glu Lys Arg Thr Leu Ile Ala  
 260 265 270  
 Glu Gly Tyr Pro Ile Pro Thr Lys Leu Pro Leu Thr Lys Ser Glu Glu  
 275 280 285  
 Lys Ala Leu Lys Lys Ile Arg Arg Lys Ile Lys Asn Lys Ile Ser Ala  
 290 295 300  
 Gln Glu Ser Arg Arg Lys Lys Glu Tyr Met Asp Ser Leu Glu Lys  
 305 310 315 320  
 Lys Val Glu Ser Cys Ser Thr Glu Asn Leu Glu Leu Arg Lys Lys Val  
 325 330 335  
 Glu Thr Leu Glu Asn Ala Asn Ser Phe Ser Ser Gly Ile Gln Pro Leu  
 340 345 350  
 Leu Cys Ser Leu Ile Gly Leu Glu Asn Pro Thr  
 355 360

&lt;210&gt; 5469

&lt;211&gt; 1292

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5469

nncgcggccg cgtcgacgga aggggaggac gtgggatggt ggcggagctg gctgcagcag  
 60  
 agctaccaag cagtcaaaga gaagtcctct gaagccttgg agtttatgaa gcgggacctg  
 120  
 acggagttaa cccaggtggt gcagcatgac acggcctgta ccatcgacgc cacggccagc  
 180  
 gtggtcaagg agaagctggc tacggaaggc tcctcaggag caacagagaa gatgaagaaa  
 240  
 gggttatctg acttcctagg ggtgatctca gacacctttg ccccttcgcc agacaaaacc  
 300  
 atcgactgcg atgtcatcac cctgatgggc acaccgtctg gcacagctga gccctatgat  
 360  
 ggcaccaagg ctgcctcta tagcctgcag tcggacccag caacctactg taatgaacca  
 420  
 gatgggcccc cggaattggt tgacgcctgg ctttcccagt tctgcttgga ggagaagaag  
 480  
 ggggagatct cagagctcct tgtaggcagc cctccatcc gggccctcta caccaagatg  
 540  
 gttccagcag ctgtttccca ttcagaattc tggcatcggt atttctataa agtccatcag  
 600  
 ttagagcagg agcaggcccc gagggacgcc ctgaagcagc gggcggaaca gagcatctct  
 660

gaagagcccg gctgggagga ggaggaagag gagctcatgg gcatttcacc catatctcca  
 720  
 aaagaggcaa aggttcctgt ggccaaaatt tctacattcc ctgaaggaga acctggcccc  
 780  
 cagagcccct gtgaagagaa tctggtgact tcagttgagc cccagcaga ggtgactcca  
 840  
 tcagagagca gtgagagcat ctccctcgtg acacagatcg ccaaccggc cactgcacct  
 900  
 gaggcacgag tgctacccaa ggacctgtcc caaagctgc tagaggcatc cttggaggaa  
 960  
 cagggcctgg ctgtggatgt gggtgagact ggacctcac cccctattca ctccaagccc  
 1020  
 ctaacgcctg ctggccacac cggcggccca gagcccaggc ctccagccag agtagagact  
 1080  
 ctgagggagg aggcgcccac agacttacgg gtgtttgagc tgaactcgga tagtgggaag  
 1140  
 tctacaccct ccaacaatgg aaagaaaggc tcaagcacgg acatcagtga ggactgggag  
 1200  
 aaagactttg acttggacat gactgaagag gaggtgcaga tggcactttc caaagtggat  
 1260  
 gcctccgggg agctgaagat gtagaggggg aa  
 1292

&lt;210&gt; 5470

&lt;211&gt; 427

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5470

Xaa	Ala	Ala	Ala	Ser	Thr	Glu	Gly	Glu	Asp	Val	Gly	Trp	Trp	Arg	Ser
1			5					10						15	
Trp	Leu	Gln	Gln	Ser	Tyr	Gln	Ala	Val	Lys	Glu	Lys	Ser	Ser	Glu	Ala
		20						25					30		
Leu	Glu	Phe	Met	Lys	Arg	Asp	Leu	Thr	Glu	Phe	Thr	Gln	Val	Val	Gln
	35					40						45			
His	Asp	Thr	Ala	Cys	Thr	Ile	Ala	Ala	Thr	Ala	Ser	Val	Val	Lys	Glu
	50				55						60				
Lys	Leu	Ala	Thr	Glu	Gly	Ser	Ser	Gly	Ala	Thr	Glu	Lys	Met	Lys	Lys
65				70					75					80	
Gly	Leu	Ser	Asp	Phe	Leu	Gly	Val	Ile	Ser	Asp	Thr	Phe	Ala	Pro	Ser
		85						90					95		
Pro	Asp	Lys	Thr	Ile	Asp	Cys	Asp	Val	Ile	Thr	Leu	Met	Gly	Thr	Pro
	100							105					110		
Ser	Gly	Thr	Ala	Glu	Pro	Tyr	Asp	Gly	Thr	Lys	Ala	Arg	Leu	Tyr	Ser
	115						120					125			
Leu	Gln	Ser	Asp	Pro	Ala	Thr	Tyr	Cys	Asn	Glu	Pro	Asp	Gly	Pro	Pro
	130					135					140				
Glu	Leu	Phe	Asp	Ala	Trp	Leu	Ser	Gln	Phe	Cys	Leu	Glu	Glu	Lys	Lys
145				150					155					160	
Gly	Glu	Ile	Ser	Glu	Leu	Leu	Val	Gly	Ser	Pro	Ser	Ile	Arg	Ala	Leu
		165						170					175		
Tyr	Thr	Lys	Met	Val	Pro	Ala	Ala	Val	Ser	His	Ser	Glu	Phe	Trp	His
	180							185				190			
Arg	Tyr	Phe	Tyr	Lys	Val	His	Gln	Leu	Glu	Gln	Glu	Gln	Ala	Arg	Arg

195	200	205
Asp Ala Leu Lys Gln Arg	Ala Glu Gln Ser Ile Ser	Glu Glu Pro Gly
210	215	220
Trp Glu Glu Glu Glu Glu	Glu Leu Met Gly Ile Ser	Pro Ile Ser Pro
225	230	235
Lys Glu Ala Lys Val Pro	Val Ala Lys Ile Ser Thr	Phe Pro Glu Gly
245	250	255
Glu Pro Gly Pro Gln Ser	Pro Cys Glu Glu Asn Leu	Val Thr Ser Val
260	265	270
Glu Pro Pro Ala Glu Val	Thr Pro Ser Glu Ser Ser	Glu Ser Ile Ser
275	280	285
Leu Val Thr Gln Ile Ala	Asn Pro Ala Thr Ala Pro	Glu Ala Arg Val
290	295	300
Leu Pro Lys Asp Leu Ser	Gln Lys Leu Leu Glu Ala	Ser Leu Glu Glu
305	310	315
Gln Gly Leu Ala Val Asp	Val Gly Glu Thr Gly Pro	Ser Pro Pro Ile
325	330	335
His Ser Lys Pro Leu Thr	Pro Ala Gly His Thr Gly	Gly Pro Glu Pro
340	345	350
Arg Pro Pro Ala Arg Val	Glu Thr Leu Arg Glu Glu	Ala Pro Thr Asp
355	360	365
Leu Arg Val Phe Glu Leu	Asn Ser Asp Ser Gly Lys	Ser Thr Pro Ser
370	375	380
Asn Asn Gly Lys Lys Gly	Ser Ser Thr Asp Ile Ser	Glu Asp Trp Glu
385	390	395
Lys Asp Phe Asp Leu Asp	Met Thr Glu Glu Val Gln	Met Ala Leu
405	410	415
Ser Lys Val Asp Ala Ser	Gly Glu Leu Lys Met	
420	425	

<210> 5471  
 <211> 534  
 <212> DNA  
 <213> Homo sapiens

<400> 5471  
 cggccgcccc gcgggggcgc agaaatagga ccgtcctggc agaggctgca gccgacccag  
 60  
 ctggccccac tacgcggggc ccagagccag ggtgggggat gcagagaccg ggcgtgcggg  
 120  
 ttgccaggtg tggcgccat gtgtgcccgt gggcagagta cagagacaca agcttgtgtg  
 180  
 gacacgaatg ttagctatg tgcgagtgc caccgagtg tgagtgcagg gaccccaggc  
 240  
 cggcctgcgt cgggtgcgcag ggcataatagg ggcgtgcacg cagtcttgga ggtgtgtgca  
 300  
 cagagccccc ggcacccgcg tgtgtgcaaa gacacaggaa cccgtctgcg tggcgctgtg  
 360  
 tgtgcaacc aaggaggtgg gcgcttgac tccaaagtgt gcgcttatcc ggatgtggat  
 420  
 gtgggggcag ccggggacag ggctgggtgt gcgtgactcg ggtgtgccgg gacccacaga  
 480  
 gcatatgtgt ccatgcctgg tgctgtgact catgtccctg ggggtgggcac gcgt  
 534

<210> 5472  
 <211> 161  
 <212> PRT  
 <213> Homo sapiens

<400> 5472  
 Met Leu Cys Gly Ser Arg His Thr Arg Val Thr His Thr Gln Pro Cys  
 1 5 10 15  
 Pro Arg Leu Pro Pro His Pro His Pro Asp Lys Arg Thr Leu Trp Ser  
 20 25 30  
 Pro Ser Ala His Leu Leu Gly Leu His Thr Gln Arg His Ala Asp Gly  
 35 40 45  
 Phe Leu Cys Leu Cys Thr His Ala Gly Ala Gly Gly Ser Val His Thr  
 50 55 60  
 Pro Pro Arg Leu Arg Ala Arg Pro Tyr Met Pro Cys Ala Pro Thr Gln  
 65 70 75 80  
 Ala Gly Leu Gly Ser Leu His Ser Pro Leu Arg Val His Ser His Ile  
 85 90 95  
 Ala Thr His Ser Cys Pro His Lys Leu Val Ser Leu Tyr Ser Ala His  
 100 105 110  
 Gly His Thr Cys Ala Pro His Leu Ala Thr Arg Thr Pro Gly Leu Cys  
 115 120 125  
 Ile Pro His Pro Gly Ser Gly Pro Arg Val Val Gly Pro Ala Gly Ser  
 130 135 140  
 Ala Ala Ala Ser Ala Arg Thr Val Leu Phe Leu Arg Pro Arg Gly Ala  
 145 150 155 160  
 Ala

<210> 5473  
 <211> 691  
 <212> DNA  
 <213> Homo sapiens

<400> 5473  
 gcgaccagca gcgctggtgg ccatgctctt ggacactacg gcctggcggg cagccctcgc  
 60  
 cgctgccgcg ccccgcgccc ccaggaggcc gcaccctgcg ccaggggccg gagacagcaa  
 120  
 catcttcttg ggctgcagg agacctgaca gatgccaaaa caaaggaaca gttgggatcc  
 180  
 aggcagcatg aggtagaatg gcaaacctac cagggtattc tgaagaagac aagagtcacg  
 240  
 gaaaaaacca agtggctgga tatcaaagga aatcatgaaa aagatggagg agctcttatt  
 300  
 actggccaag gaaagcagtc ggagcaacca tacaatttgg tttggacact ttacaacatc  
 360  
 cactattctt tctccatcac caggaatccg gtcaataatg agttcggcta tagcttattt  
 420  
 gtgtggacat ctccatacac ttggtggact gatgcctgtt ttgcacactc gtcacttcca  
 480  
 gggcactttg gaacttgagg tgggagactg gaaggataat aggaggtacc ggatttttgc  
 540

ttttgatcac gacctcttta gctttgcaga tttgatcttt gggaagtggc ctgtgggtct  
 600  
 tatcaccaat cctaaatcac tcctttatag ttgtggtgaa catgaaccac tagaaagact  
 660  
 tcttcactca acccacatta gatttggtaac a  
 691

<210> 5474  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

<400> 5474  
 Met Lys Lys Met Glu Glu Leu Leu Leu Leu Ala Lys Glu Ser Ser Arg  
 1 5 10 15  
 Ser Asn His Thr Ile Trp Phe Gly His Phe Thr Thr Ser Thr Ile Leu  
 20 25 30  
 Ser Pro Ser Pro Gly Ile Arg Ser Ile Met Ser Ser Ala Ile Ala Tyr  
 35 40 45  
 Leu Cys Gly His Leu His Thr Leu Gly Gly Leu Met Pro Val Leu His  
 50 55 60  
 Thr Arg His Phe Gln Gly Thr Leu Glu Leu Glu Val Gly Asp Trp Lys  
 65 70 75 80  
 Asp Asn Arg Arg Tyr Arg Ile Phe Ala Phe Asp His Asp Leu Phe Ser  
 85 90 95  
 Phe Ala Asp Leu Ile Phe Gly Lys Trp Pro Val Val Leu Ile Thr Asn  
 100 105 110  
 Pro Lys Ser Leu Leu Tyr Ser Cys Gly Glu His Glu Pro Leu Glu Arg  
 115 120 125  
 Leu Leu His Ser Thr His Ile Arg Leu Val Thr  
 130 135

<210> 5475  
 <211> 628  
 <212> DNA  
 <213> Homo sapiens

<400> 5475  
 ggcacacacg aaacagcctt cctgggaccc aaggacctgt tcccctacga caaatgtaaa  
 60  
 gacaagtacg ggaagcccaa caagaggaaa ggcttcaatg aagggtgtg ggagatccag  
 120  
 aacaaccccc acgccagcta cagcgccctt ccgccagtga gctcctccga cagcgaggcc  
 180  
 cccgaggcca accccgccga cggcagtgac gctgacgagg acgatgagga ccgggggggc  
 240  
 atggccgtca cagcggtaac cgccacagct gccagcgaca ggatggagag cgactcagac  
 300  
 tcagacaaga gtagcgacaa cagtggcctg aagaggaaga cgcctgcgct aaagatgtcg  
 360  
 gtctcgaaac gagcccgaac ggctccagc gacctggatc aggccagcgt gtcccatcc  
 420  
 gaagaggaga actcggaag ctcactctgag tcggagaaga ccagcgacca ggacttcaca  
 480



cctgagaaga aagcagcggc cggggcgcca cggagggggc ctctgggggg acggaaaaaa  
540  
aagaaggcgc cgtcagcctc cgactccgac tccaaggccg attcggacgg ggccaagcct  
600  
gagccggtgg ccatggcgcg gtcggcgt  
628

<210> 5476  
<211> 209  
<212> PRT  
<213> Homo sapiens

<400> 5476  
Gly Thr His Glu Thr Ala Phe Leu Gly Pro Lys Asp Leu Phe Pro Tyr  
1 5 10 15  
Asp Lys Cys Lys Asp Lys Tyr Gly Lys Pro Asn Lys Arg Lys Gly Phe  
20 25 30  
Asn Glu Gly Leu Trp Glu Ile Gln Asn Asn Pro His Ala Ser Tyr Ser  
35 40 45  
Ala Pro Pro Pro Val Ser Ser Ser Asp Ser Glu Ala Pro Glu Ala Asn  
50 55 60  
Pro Ala Asp Gly Ser Asp Ala Asp Glu Asp Asp Glu Asp Arg Gly Val  
65 70 75 80  
Met Ala Val Thr Ala Val Thr Ala Thr Ala Ala Ser Asp Arg Met Glu  
85 90 95  
Ser Asp Ser Asp Ser Asp Lys Ser Ser Asp Asn Ser Gly Leu Lys Arg  
100 105 110  
Lys Thr Pro Ala Leu Lys Met Ser Val Ser Lys Arg Ala Arg Lys Ala  
115 120 125  
Ser Ser Asp Leu Asp Gln Ala Ser Val Ser Pro Ser Glu Glu Glu Asn  
130 135 140  
Ser Glu Ser Ser Ser Glu Ser Glu Lys Thr Ser Asp Gln Asp Phe Thr  
145 150 155 160  
Pro Glu Lys Lys Ala Ala Val Arg Ala Pro Arg Arg Gly Pro Leu Gly  
165 170 175  
Gly Arg Lys Lys Lys Lys Ala Pro Ser Ala Ser Asp Ser Asp Ser Lys  
180 185 190  
Ala Asp Ser Asp Gly Ala Lys Pro Glu Pro Val Ala Met Ala Arg Ser  
195 200 205  
Ala

<210> 5477  
<211> 727  
<212> DNA  
<213> Homo sapiens

<400> 5477  
ttttttgtta gtgtttcctt tattataaag cactgaaata agttaataa acaggtggga  
60  
ggctgggcag tccccagcc gggttggtcca cagcccctgg gggcagtgga ggtgaataca  
120  
gggcccttct cactgagctc gtgaagtgcc tcagtcaagg caaggtcccc tgggtccatat  
180

gggccccccc gcccatgggg ttgggctggt ccttatagtg cctacgttag tctgtgtgga  
 240  
 gcccttgcc agcgggggag aaaaagggtg cttctggtcc gtctgtataa aacatggccc  
 300  
 ctcacctgtc ggccccccac acagctggca ggctgggctg gcctctcacc cctggcctcc  
 360  
 cctggacccc tggttggtc ctcaacttca ctctccgcac ttagtgcccg gccgccccca  
 420  
 gactcatcgt cgctcagccc atagggaagc ccaggcctgg ccccagaga gtctccttec  
 480  
 gagtctctct cgaagcccat gagctggcca ctgttgccgt cgccttcctc ctcttctct  
 540  
 tcctcctcaa actccagatc ctggcctagt agcaaatac tctccaatac caggggccccg  
 600  
 ggtccttcgt cgaggagtc ttcagtatcc actttgaccc cctcgcatctt cacgggctgc  
 660  
 ggggtggcttt gcttccttcg gggcatcgtg accggctcca gcccgacgcg cctccggcct  
 720  
 gcggccg  
 727

<210> 5478  
 <211> 99  
 <212> PRT  
 <213> Homo sapiens

<400> 5478  
 Ser Ala Ser Val Lys Ala Arg Ser Pro Gly Pro Tyr Gly Pro Pro Arg  
 1 5 10 15  
 Pro Trp Gly Trp Ala Gly Pro Tyr Ser Ala Tyr Val Ser Leu Cys Gly  
 20 25 30  
 Ala Pro Gly Gln Arg Gly Arg Lys Arg Trp Leu Leu Val Arg Leu Tyr  
 35 40 45  
 Lys Thr Trp Pro Leu Thr Cys Arg Pro Pro Thr Gln Leu Ala Gly Trp  
 50 55 60  
 Ala Gly Leu Ser Pro Leu Ala Ser Pro Gly Pro Leu Ala Gly Ser Ser  
 65 70 75 80  
 Thr Ser Leu Ser Ala Leu Ser Ala Arg Pro Pro Pro Asp Ser Ser Ser  
 85 90 95  
 Leu Ser Pro

<210> 5479  
 <211> 1386  
 <212> DNA  
 <213> Homo sapiens

<400> 5479  
 gccggcacca cagaccgaga agaagccact cggtctttgg ctgagaagcg gcgccaggcc  
 60  
 cgggagcagc gggagcgcga ggagcaggag cggaggctgc aggcagaaag ggacaagcga  
 120  
 atgcgagagg agcagctggc acgggaggcc gagggccggg cggagcggga ggcggaggcc  
 180

cggaggcggg aggagcagga ggcacgagag aaggcgcagg ccgagcagga ggagcaggag  
 240  
 cggctgcaga agcagaaaga ggaggccgaa gctcggtcgc gggaagaggc ggagcggcag  
 300  
 cgtctggagc gggaaaagca cttccagcag caggagcaag agcggcaaga gcgcagaaag  
 360  
 cgtctggagg agatcatgaa gaggactcgg aagtcagaag tttctgaaac caagcagaag  
 420  
 caggacagca aggaggccaa cgccaacggc tccagcccag agcctgtgaa agctgtggag  
 480  
 gctcggctcc cagggtgca gaaggaggct gtgcagaaag aggagcccat cccacaggag  
 540  
 cctcagtga gtctcccaag caaggagttg ccagcgtccc tggatgaatg cctgcagcct  
 600  
 ctcccagcac accaggagaa tggcttctcc accaacggac cctctgggga caagagtctg  
 660  
 agccgaacac cagagacact cctgcccttt gcagaggcag aagccttct caagaaagct  
 720  
 gtggtgcagt ccccgaggt cacagaagtc ctttaagagg gtttgccttg gatccgggca  
 780  
 cagttgtgag ggctcctctg catcacctac caggatgtct ggaggagaaa aagacagaac  
 840  
 aaagatggaa gtggcctggg cccctggggg tgggtcctct ctgttgtttt taatctgcac  
 900  
 cttatagact gatgtctctt tggccggagc cagatctgcc cctcagtga ttcgtgtgct  
 960  
 cgcacgcgca gacatccctt ccccccata cacacatata cactcacagc ctctctggcc  
 1020  
 tcttcccttg gggaggggac acctgtagta tttgccttga tttggtggg tacagtggat  
 1080  
 gtgaatactg taaatagctt gtgctcagac tcctctgcgt ggagaggggtg ggtgcaggag  
 1140  
 gcagaccctc ccccaaagc cccctgggga gatcttctc tctctattta actgtaactg  
 1200  
 agggggatcc caggctctgg gatgggggac accttgggac acaggatact ggttgcttca  
 1260  
 ggggtaccca tgccccctgc cctgccttgg aatcagtgtt actgcatctg attaaatgtc  
 1320  
 tccagaaata aagaataatt ctgccaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1380  
 aaaaaa  
 1386

&lt;210&gt; 5480

&lt;211&gt; 251

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5480

Ala	Gly	Thr	Thr	Asp	Arg	Glu	Glu	Ala	Thr	Arg	Leu	Leu	Ala	Glu	Lys
1				5				10						15	
Arg	Arg	Gln	Ala	Arg	Glu	Gln	Arg	Glu	Arg	Glu	Glu	Gln	Glu	Arg	Arg
			20				25					30			
Leu	Gln	Ala	Glu	Arg	Asp	Lys	Arg	Met	Arg	Glu	Glu	Gln	Leu	Ala	Arg

35 40 45  
 Glu Ala Glu Ala Arg Ala Glu Arg Glu Ala Glu Ala Arg Arg Arg Glu  
 50 55 60  
 Glu Gln Glu Ala Arg Glu Lys Ala Gln Ala Glu Gln Glu Glu Gln Glu  
 65 70 75 80  
 Arg Leu Gln Lys Gln Lys Glu Glu Ala Glu Ala Arg Ser Arg Glu Glu  
 85 90 95  
 Ala Glu Arg Gln Arg Leu Glu Arg Glu Lys His Phe Gln Gln Gln Glu  
 100 105 110  
 Gln Glu Arg Gln Glu Arg Arg Lys Arg Leu Glu Glu Ile Met Lys Arg  
 115 120 125  
 Thr Arg Lys Ser Glu Val Ser Glu Thr Lys Gln Lys Gln Asp Ser Lys  
 130 135 140  
 Glu Ala Asn Ala Asn Gly Ser Ser Pro Glu Pro Val Lys Ala Val Glu  
 145 150 155 160  
 Ala Arg Ser Pro Gly Leu Gln Lys Glu Ala Val Gln Lys Glu Glu Pro  
 165 170 175  
 Ile Pro Gln Glu Pro Gln Trp Ser Leu Pro Ser Lys Glu Leu Pro Ala  
 180 185 190  
 Ser Leu Val Asn Gly Leu Gln Pro Leu Pro Ala His Gln Glu Asn Gly  
 195 200 205  
 Phe Ser Thr Asn Gly Pro Ser Gly Asp Lys Ser Leu Ser Arg Thr Pro  
 210 215 220  
 Glu Thr Leu Leu Pro Phe Ala Glu Ala Glu Ala Phe Leu Lys Lys Ala  
 225 230 235 240  
 Val Val Gln Ser Pro Gln Val Thr Glu Val Leu  
 245 250

<210> 5481  
 <211> 1513  
 <212> DNA  
 <213> Homo sapiens

<400> 5481  
 tgtccaatga ggagccagcg cgggattgct tcaggacaga ctatttctga gtctcggcgg  
 60  
 aaggcggagg gaaggccgtg gggatggcca atcaaagggg gcgactcagg tcggtgggga  
 120  
 ccggcagcca atcaggagag cgctcgctcc tgactcgacc ggcccacgct tcccgccagt  
 180  
 cccctaacce tgaggctgcc gcgcggcggt cactgcgccg gggtagtggg cccagtggt  
 240  
 gcgctctctg gccgttcctt acactttgct tcaggctcca gtgcaggggc gtagtgggat  
 300  
 atggccaact cgggctgcaa ggacgtcacg ggtccagatg aggagagttt tctgtacttt  
 360  
 gcctacggca gcaacctgct gacagagagg atccacctcc gaaaccctc ggcggcggtc  
 420  
 ttctgtgtgg ccgcctgca ggattttaag cttgactttg gcaattccca aggcaaaaca  
 480  
 agtcaaactt ggcattggagg gatagccacc atttttcaga gtcctggcga tgaattgtgg  
 540  
 ggagtagtat ggaaaatgaa caaaagcaat ttaaattctc tggatgagca agaagggggt  
 600

aaaagtggaa tgtatgttgt aatagaagtt aaagttgcaa ctcaagaagg aaaagaaata  
 660  
 acctgtcgaa gttatctgat gacaaattac gaaagtgtc ccccatcccc acagtataaa  
 720  
 aagattattht gcatgggtgc aaaagaaaat ggtttgccgc tggagtatca agagaagtta  
 780  
 aaagcaatag aaccaaata ctatacagga aaggtctcag aagaaattga agacatcatc  
 840  
 aaaaaggggg aaacacaaac tcttttagaac ataacagaat atatctaagg gtattctatg  
 900  
 tgctaataata aaatattttt aacacttgag aacagggatc tgggggatct ccacgtttga  
 960  
 tccattttca gcagtgtctt gaaggagtat cttacttggg tgattccttg tttttagact  
 1020  
 ataaaaagaa actgggatag gagtttagaca atttaaaagg ggtgtatgag ggcctgaaat  
 1080  
 atgtgacaaa tgaatgtgag tacccttctt gtgaacactg aaagctattc tcttgaattg  
 1140  
 atcttaagtg tctccttgct ctggtaaaag atagatttgt agctcacttg atgatgggtg  
 1200  
 tgggtgaattg ctctgctctg tctgagattt ttaaaaatca gcttaatgag agtaatctgc  
 1260  
 agacaattga taataacatt ttgaaaattg gaaagatggg atactgtttt tagaggaata  
 1320  
 aacgtatttg tggtttaaaa aaaaaagagc aacttccttt gcactgtata cccttttgta  
 1380  
 ttattaggat ttataactat gtttatatgt tgcctattta ataaatcgct taaagttata  
 1440  
 tatcttgaat atctttccat aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1500  
 aaaaaaaaaa aaa  
 1513

&lt;210&gt; 5482

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5482

Met	Ala	Asn	Ser	Gly	Cys	Lys	Asp	Val	Thr	Gly	Pro	Asp	Glu	Glu	Ser
1				5					10				15		
Phe	Leu	Tyr	Phe	Ala	Tyr	Gly	Ser	Asn	Leu	Leu	Thr	Glu	Arg	Ile	His
			20					25					30		
Leu	Arg	Asn	Pro	Ser	Ala	Ala	Phe	Phe	Cys	Val	Ala	Arg	Leu	Gln	Asp
			35				40					45			
Phe	Lys	Leu	Asp	Phe	Gly	Asn	Ser	Gln	Gly	Lys	Thr	Ser	Gln	Thr	Trp
	50					55					60				
His	Gly	Gly	Ile	Ala	Thr	Ile	Phe	Gln	Ser	Pro	Gly	Asp	Glu	Leu	Trp
65					70					75				80	
Gly	Val	Val	Trp	Lys	Met	Asn	Lys	Ser	Asn	Leu	Asn	Ser	Leu	Asp	Glu
				85					90				95		
Gln	Glu	Gly	Val	Lys	Ser	Gly	Met	Tyr	Val	Val	Ile	Glu	Val	Lys	Val
			100					105				110			
Ala	Thr	Gln	Glu	Gly	Lys	Glu	Ile	Thr	Cys	Arg	Ser	Tyr	Leu	Met	Thr

```

<400> 5483
actttcctcg acagccactg tgagggtgaac agggactggc tccagcctct nttnacaggg
60
gtcaaagagg actacacgcg ggtggtgtgc cctgtgatcg atatcattaa cctggacacc
120
ttcacctaca tcgagtctgc ctcgagagctc agaggggggt ttgactggag cctccacttc
180
cagtggggagc agctctcccc agagcagaag gctcggcgcc tggacccac ggagcccatc
240
aggactccta tcatagctgg agggctcttc gtgatcgaca aagcttggtt tgattacctg
300
gggaaatatg atatggacat ggacatctgg ggtggggaga actttgaaat ctcttccga
360
gtgtggatgt gcgggggcag cctagagatc gtcccctgca gccgagtggg gcacgtcttc
420
cggaagaagc acccctacgt tttccctgat ggaaatgcca acacgtatat aaagaacacc
480
aagcggacag ctgaagtgtg gatggatgaa tacaagcaat actattacgc tgcccggcca
540
ttcgccctgg agaggccctt cgggaatgtt gagagcagat tggacctgag gaagaatctg
600
cgctgccaga gcttcaagtg gtacctggag aatatctacc ctgaactcag catccccaag
660
gagttctcca tccagaaggg caatatccga cagagacaga agtgccctgga atctcaaagg
720
cagaacaacc aagaaacccc aaacctaag ttgagcccct gtgccaaggt caaaggcgaa
780
gatgcaaagt cccaggatat ggccttcaca tacaccaga agatcctcca ggaggagctg
840
tgcctgtcag tcatcacctt gttccctggc gcccagtggt ttcttgteet ttgcaagaat
900
ggagatgacc gacagcaatg gaccaaaact ggttcccaca tcgagcacat agcatcccac
960
ctctgcctcg atacagatat gttcgggtgat ggcaccgaga acggcaagga aatcgtcgtc
1020
aaccatgtg agtcctcact catgagccag cactgggaca tggtgagctc ttgaggaccc
1080
ctgccagaag cagcaagggc catgggggtg tgcttccctg gaccagaaca gactggaaac
1140

```

tgggcagcaa gcagcctgca accacctcag acatcctgga ctgggaggtg gaggcagagc  
 1200  
 cccccaggac aggagcaact gtctcagggg ggacagagga aaacatcaca agccaatggg  
 1260  
 gctcaaagac aaatcccaca tggtctcaag gccgttaagt tccagtcctg gccagtcatt  
 1320  
 ccctgattgg tatctggaga cagaaaccta atgggaagtg tttattgttc cttttcctac  
 1380  
 aaaggaagca gtctctggag gccagaaaga aaagccttct ttttactag gccaggacta  
 1440  
 cattgagaga tgaagaatgg aggttggttc caaaagaaat aaagagaaac ttagaagttg  
 1500  
 tctctggaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa  
 1552

<210> 5484  
 <211> 357  
 <212> PRT  
 <213> Homo sapiens

<400> 5484  
 Thr Phe Leu Asp Ser His Cys Glu Val Asn Arg Asp Trp Leu Gln Pro  
 1 5 10 15  
 Leu Xaa Asp Arg Val Lys Glu Asp Tyr Thr Arg Val Val Cys Pro Val  
 20 25 30  
 Ile Asp Ile Ile Asn Leu Asp Thr Phe Thr Tyr Ile Glu Ser Ala Ser  
 35 40 45  
 Glu Leu Arg Gly Gly Phe Asp Trp Ser Leu His Phe Gln Trp Glu Gln  
 50 55 60  
 Leu Ser Pro Glu Gln Lys Ala Arg Arg Leu Asp Pro Thr Glu Pro Ile  
 65 70 75 80  
 Arg Thr Pro Ile Ile Ala Gly Gly Leu Phe Val Ile Asp Lys Ala Trp  
 85 90 95  
 Phe Asp Tyr Leu Gly Lys Tyr Asp Met Asp Met Asp Ile Trp Gly Gly  
 100 105 110  
 Glu Asn Phe Glu Ile Ser Phe Arg Val Trp Met Cys Gly Gly Ser Leu  
 115 120 125  
 Glu Ile Val Pro Cys Ser Arg Val Gly His Val Phe Arg Lys Lys His  
 130 135 140  
 Pro Tyr Val Phe Pro Asp Gly Asn Ala Asn Thr Tyr Ile Lys Asn Thr  
 145 150 155 160  
 Lys Arg Thr Ala Glu Val Trp Met Asp Glu Tyr Lys Gln Tyr Tyr Tyr  
 165 170 175  
 Ala Ala Arg Pro Phe Ala Leu Glu Arg Pro Phe Gly Asn Val Glu Ser  
 180 185 190  
 Arg Leu Asp Leu Arg Lys Asn Leu Arg Cys Gln Ser Phe Lys Trp Tyr  
 195 200 205  
 Leu Glu Asn Ile Tyr Pro Glu Leu Ser Ile Pro Lys Glu Phe Ser Ile  
 210 215 220  
 Gln Lys Gly Asn Ile Arg Gln Arg Gln Lys Cys Leu Glu Ser Gln Arg  
 225 230 235 240  
 Gln Asn Asn Gln Glu Thr Pro Asn Leu Lys Leu Ser Pro Cys Ala Lys  
 245 250 255  
 Val Lys Gly Glu Asp Ala Lys Ser Gln Val Trp Ala Phe Thr Tyr Thr

260 265 270  
Gln Lys Ile Leu Gln Glu Glu Leu Cys Leu Ser Val Ile Thr Leu Phe  
275 280 285  
Pro Gly Ala Pro Val Val Leu Val Leu Cys Lys Asn Gly Asp Asp Arg  
290 295 300  
Gln Gln Trp Thr Lys Thr Gly Ser His Ile Glu His Ile Ala Ser His  
305 310 315 320  
Leu Cys Leu Asp Thr Asp Met Phe Gly Asp Gly Thr Glu Asn Gly Lys  
325 330 335  
Glu Ile Val Val Asn Pro Cys Glu Ser Ser Leu Met Ser Gln His Trp  
340 345 350  
Asp Met Val Ser Ser  
355

&lt;210&gt; 5485

&lt;211&gt; 1549

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5485

nacgcgtgaa gggcgtagc gatcgcgagg ggacagcgct actgcggctt tggtagcaca  
60  
gtgtacccgg aggagcacag cagatggagg gacagctcca ggacgagggt gtggaattcg  
120  
ccgttcgaaa gcagggacta aaagccccac ttcgtcttac gttccgaaag gaaggcgtct  
180  
gttgagcctt tctctcagtc gtgagggagg cgtcgacggc gtgcggaagt cctgagttga  
240  
ggcttgccgg atcctttccg gagaaagcgc aggcataaag cgcaggtgaa gatgtccaac  
300  
tacgtgaacg acatgtggcc gggctcgccg caggagaagg attcgccctc gacctcgagg  
360  
tcgggagggt ccagccgggt gtcgtcgagg tctaggagcc gctctttttc cagaagctct  
420  
cggtccatt cccgcgtctc gagccggttt tcgtccagga gtcggaggag caagtccagg  
480  
tcccggtccc gaaggcgcca ccagcggaag tacaggcgct actcgcggtc atactcgagg  
540  
agccggtcgc gatcccgag ccgcccgtac cgagagaggc gctacgggtt caccaggaga  
600  
tactaccggt ctcttcgag gtaccgggtc cgggtccgta gcaggtcgag ctctcgggga  
660  
aggtagtact gcggaagggt gtacgcgagc gcgaggggac agcgctacta cggctttggt  
720  
cgcacagtgt acccgaggga gcacagcaga tggagggaca gatccaggac gaggtcgagg  
780  
agcagaaccc cctttcgctt aagtgaataa gatcgaatgg agctgttaga aatagcaaaa  
840  
accaatgcag cgaaagctct aggaacaacc aacattgact tgccagctag tctcagaact  
900  
gttccttcag ccaaagaaac aagccgtgga ataggtgtat caagtaatgg tgcaaagcct  
960  
gaactgtcgg aaaaggtaac agaagatgga actcgaaatc ccaatgaaaa acctaccag  
1020



caaagaagca tagcttttag ctctaataat tctgtagcaa agccaataca aaaatcagct  
 1080  
 aaagctgcc aagaagaggc atcttcaaga tcaccaaaaa tagatcagaa aaaaagtcca  
 1140  
 tatggactgt ggatacctat ctaaaagaag aaaactgatg gctaagtttg catgaaaact  
 1200  
 gcactttatt gcaagttagt gtttctagca ttatcccatc cctttgagcc attcaggggt  
 1260  
 acttgtgcat ttaaaaacca acacaaaaag atgtaaatac ttaacactca aatattaaca  
 1320  
 ttttaggttt ctcttgcaaga tatgagagat agcacagatg gaccaaagggt tatgcacagg  
 1380  
 tgggagtctt ttgtatatag ttgtaaatat tgtcttggtt atgtaaaaat gaaatTTTTT  
 1440  
 agacacagta attgaaactgt attcctgttt tgtatatTTT ataaatttct tgttttcatt  
 1500  
 cttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaga  
 1549

<210> 5486

<211> 290

<212> PRT

<213> Homo sapiens

<400> 5486

Met	Ser	Asn	Tyr	Val	Asn	Asp	Met	Trp	Pro	Gly	Ser	Pro	Gln	Glu	Lys
1				5					10					15	
Asp	Ser	Pro	Ser	Thr	Ser	Arg	Ser	Gly	Gly	Ser	Ser	Arg	Leu	Ser	Ser
			20					25					30		
Arg	Ser	Arg	Ser	Arg	Ser	Phe	Ser	Arg	Ser	Ser	Arg	Ser	His	Ser	Arg
			35				40					45			
Val	Ser	Ser	Arg	Phe	Ser	Ser	Arg	Ser	Arg	Arg	Ser	Lys	Ser	Arg	Ser
			50			55					60				
Arg	Ser	Arg	Arg	Arg	His	Gln	Arg	Lys	Tyr	Arg	Arg	Tyr	Ser	Arg	Ser
65					70				75					80	
Tyr	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Arg	Tyr	Arg	Glu	Arg
				85				90						95	
Arg	Tyr	Gly	Phe	Thr	Arg	Arg	Tyr	Tyr	Arg	Ser	Pro	Ser	Arg	Tyr	Arg
			100					105					110		
Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Ser	Arg	Gly	Arg	Ser	Tyr	Cys	Gly
			115				120					125			
Arg	Ala	Tyr	Ala	Ile	Ala	Arg	Gly	Gln	Arg	Tyr	Tyr	Gly	Phe	Gly	Arg
			130				135					140			
Thr	Val	Tyr	Pro	Glu	Glu	His	Ser	Arg	Trp	Arg	Asp	Arg	Ser	Arg	Thr
145					150				155					160	
Arg	Ser	Arg	Ser	Arg	Thr	Pro	Phe	Arg	Leu	Ser	Glu	Lys	Asp	Arg	Met
				165				170					175		
Glu	Leu	Leu	Glu	Ile	Ala	Lys	Thr	Asn	Ala	Ala	Lys	Ala	Leu	Gly	Thr
			180				185					190			
Thr	Asn	Ile	Asp	Leu	Pro	Ala	Ser	Leu	Arg	Thr	Val	Pro	Ser	Ala	Lys
		195					200					205			
Glu	Thr	Ser	Arg	Gly	Ile	Gly	Val	Ser	Ser	Asn	Gly	Ala	Lys	Pro	Glu
		210				215					220				
Leu	Ser	Glu	Lys	Val	Thr	Glu	Asp	Gly	Thr	Arg	Asn	Pro	Asn	Glu	Lys

[illegible]

```
<210> 5487
<211> 1716
<212> DNA
<213> Homo sapiens
```

<400> 5487  
acgccaccgg gtcggaggac tacgagaacc tgccgactag cgcctccgtg tccaccacaca  
60  
tgacagcagg agcgatggcc gggatcctgg agcactcggg catgtacccg gtggactcgg  
120  
tgaagagaca ggggtcttgcc ttgtcgccta ggctggagtg cagtgttgag atcatagttt  
180  
actgcagcct cgaactcctg ggtacaagga atcctccctc ctgagcctcc tgagtagctg  
240  
ggattacaga cacgaatgca gagtttgagt ccagatccca aagcccagta cacaagtatc  
300  
tacggagccc tcaagaaaat catgcggacc gaaggcttct ggaggccctt gcgaggcgctc  
360  
aacgtcatga tcatgggtgc agggccagcc catgccatgt attttgctg ctatgaaaac  
420  
atgaaaagga ctttaaata gaatttccac caccaaggaa acagccacct agccaacggg  
480  
atagctggga gtatggccac cctgctccac gatgcggtaa tgaatccagc agaagtgggtg  
540  
aagcagcgct tgcagatgta caactcgcag caccggtcag caatcagctg catccggacg  
600  
gtgtggagga ccgagggggt gggggccttc taccggagct acaccacgca gctgaccatg  
660  
aacatccccct tccagtccat ccacttcctc acctatgagt tcctgcagga gcaggtaac  
720  
ccccaccgga cctacaaccc gcagtccac atcatctcag gcgggctggc cggggccctc  
780  
gccgcggccg ccacgacccc cctggacgtc tgtaagaccc ttctgaacac tcaggagaac  
840  
gtggccctct cgctggccaa catcagcggc cggctgtcgg gtatggccaa tgccttcgg  
900  
acggtgtacc agctcaacgg cctggccggc tacttcaaag gcatccaggc gcgtgtcatc  
960  
taccagatgc cctccaccgc catttcttgg tctgtctatg agttcttcaa gtactttctc  
1020  
accaagcgcc agctggaaaa tcgagctcca tactaaagga agggatcata gaatcttttc  
1080  
ttaaagtcac tctctgcctg catccagccc cttgccctct cctcacacgt agatcatttt  
1140

ttttttttgc aggggtgctgc ctatgggccc tctgctcccc aatgccttag agagaggagg  
1200  
ggacgggacg gcacggccgc tcaccggaag gctgtgtgcg gggacatccg aggtggtggt  
1260  
ggacaggaag gacttgggaa ggggagcgag aaattgcttt ttctcttcct ccctgggcag  
1320  
aatgtagctt ttctgcttca ctgtggcagc ctctccctg gatccttaga tcccagagga  
1380  
gggaagaaaa ttgcagtga ctgaaaacag taaaaaaaaa aaaatttatg tatataaaag  
1440  
ttgcattaca cagtacaaaa tagatggata atgtttatcc tttatttttc tatgtagaag  
1500  
tttttgaatt tgtgtgtgtg cttgtgctg tctacaccta gtattacggc tgggactctc  
1560  
cagctgtttt tgttgttgtt atgtttttta gaggggtgaa ttcttccatc aggtgaacga  
1620  
aaaaggcaac aaagtaataa atcagtgaat gtggccggca gctgtgttta gcccctccag  
1680  
atggaagttt cacttgaatg taaaataata aagttt  
1716

&lt;210&gt; 5488

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5488

Leu	Gly	Leu	Gln	Thr	Arg	Met	Gln	Ser	Leu	Ser	Pro	Asp	Pro	Lys	Ala
1				5					10					15	
Gln	Tyr	Thr	Ser	Ile	Tyr	Gly	Ala	Leu	Lys	Lys	Ile	Met	Arg	Thr	Glu
			20					25					30		
Gly	Phe	Trp	Arg	Pro	Leu	Arg	Gly	Val	Asn	Val	Met	Ile	Met	Gly	Ala
		35					40					45			
Gly	Pro	Ala	His	Ala	Met	Tyr	Phe	Ala	Cys	Tyr	Glu	Asn	Met	Lys	Arg
	50					55					60				
Thr	Leu	Asn	Asp	Val	Phe	His	His	Gln	Gly	Asn	Ser	His	Leu	Ala	Asn
65					70					75					80
Gly	Ile	Ala	Gly	Ser	Met	Ala	Thr	Leu	Leu	His	Asp	Ala	Val	Met	Asn
			85					90						95	
Pro	Ala	Glu	Val	Val	Lys	Gln	Arg	Leu	Gln	Met	Tyr	Asn	Ser	Gln	His
			100					105						110	
Arg	Ser	Ala	Ile	Ser	Cys	Ile	Arg	Thr	Val	Trp	Arg	Thr	Glu	Gly	Leu
		115					120					125			
Gly	Ala	Phe	Tyr	Arg	Ser	Tyr	Thr	Thr	Gln	Leu	Thr	Met	Asn	Ile	Pro
	130					135					140				
Phe	Gln	Ser	Ile	His	Phe	Ile	Thr	Tyr	Glu	Phe	Leu	Gln	Glu	Gln	Val
145				150					155						160
Asn	Pro	His	Arg	Thr	Tyr	Asn	Pro	Gln	Ser	His	Ile	Ile	Ser	Gly	Gly
			165					170						175	
Leu	Ala	Gly	Ala	Leu	Ala	Ala	Ala	Ala	Thr	Thr	Pro	Leu	Asp	Val	Cys
		180					185						190		
Lys	Thr	Leu	Leu	Asn	Thr	Gln	Glu	Asn	Val	Ala	Leu	Ser	Leu	Ala	Asn
	195					200						205			
Ile	Ser	Gly	Arg	Leu	Ser	Gly	Met	Ala	Asn	Ala	Phe	Arg	Thr	Val	Tyr

210	215	220
Gln Leu Asn Gly Leu Ala Gly Tyr Phe Lys Gly Ile Gln Ala Arg Val		
225	230	235
Ile Tyr Gln Met Pro Ser Thr Ala Ile Ser Trp Ser Val Tyr Glu Phe		240
	245	250
Phe Lys Tyr Phe Leu Thr Lys Arg Gln Leu Glu Asn Arg Ala Pro Tyr		255
	260	265
		270

<210> 5489  
 <211> 1600  
 <212> DNA  
 <213> Homo sapiens

<400> 5489  
 aaatttccgg ctcaactcag gcatctccag gtggatcatgg atttgggtcca tgagcttctt  
 60  
 cagcaagtcc ccaaacggat cctggctgcg cctgtggcag aggttggtact gtttgcaagg  
 120  
 ctgttggtcg tgctcctgca gctgggggca gcagttcttg ggtgacatga tgcaccacgt  
 180  
 gtccaaattg gcacagagct gcaggacgtg gttgatggcc ccatcgagtt tggaggccca  
 240  
 gagaatccaa aactggagat gctggaaaag atcctgcaaa ggcagttcag tagctctaac  
 300  
 agccctcggg gtatcatctt caccgcacc cgccaaagcg cacactccct cctgctctgg  
 360  
 ctccagcagc agcagggcct gcagactgtg gacatccggg ccagctact gattggggct  
 420  
 gggaacagca gccagagcac ccacatgacc cagagggacc agcaagaagt gatccagaag  
 480  
 ttccaagatg gaacctgaa ccttctggtg gccacgagtg tggcggagga ggggctggac  
 540  
 atccacatt gcaatgtggt ggtgcgttat gggctcttga ccaatgaaat ctccatggtc  
 600  
 caggccaggg gccgtgcccg ggccgatcag agtggtatag cgtttgtagc aactgaaggt  
 660  
 agccgggagc tgaagcggga gctgatcaac gaggcgctgg agacgctgat ggagcaggca  
 720  
 gtggctgctg tgcagaaaat ggaccaggcc gagtaccagg ccaagatccg ggatctgcag  
 780  
 caggcagcct tgaccaagcg ggcggcccag gcagcccagc gggagaacca gcggcagcag  
 840  
 ttcccagtg agcacgtgca gctactctgc atcaactgca tgggtggctgt gggccatggc  
 900  
 agcgacctgc ggaagggtga gggcaccac catgtcaatg tgaacccaa cttctcgaac  
 960  
 tactataatg tctccaggga tcctgtggtc atcaacaaag tcttcaagga ctggaagcct  
 1020  
 gggggtgtca tcagctgcag gaactgtggg gaggtctggg gtctgcagat gatctacaag  
 1080  
 tcagtgaagc tgccagtgtc caaagtccgc agcatgctgc tggagacccc tcaggggagg  
 1140  
 atccaggcca aaaagtgtgc ccgcgtgccc ttctccgtgc ctgactttga cttcctgcag  
 1200

cattgtgccg agaacttgtc ggacctctcc ctggactgac cacctcattg ctgcagtgcc  
 1260  
 cggtttgggc tgtagggggc gggagagtct gcagcagact ccaggcccct ccttcttgaa  
 1320  
 tcatcagctg tgggcatcag gccaccagc cacacaggag tcctgggcac cctggcttag  
 1380  
 gctcccgcga tgggaaaaca accggagggc cagagcttag tccagacctt ccttgtaggc  
 1440  
 acatagacat tttcatatgc actggatgga gttagggaaa ctgaggcaaa agaatttgcc  
 1500  
 atactgtact cagaatcacg acattccttc cctaccaagg ccacttctat tttttgaggc  
 1560  
 tcctcataaa aataaatgaa aaaatgggat agaaaaaaaa  
 1600

<210> 5490

<211> 357

<212> PRT

<213> Homo sapiens

<400> 5490

His	Asp	Ala	Pro	Arg	Val	Gln	Ile	Gly	Thr	Glu	Leu	Gln	Asp	Val	Val
1			5						10					15	
Asp	Gly	Pro	Ile	Glu	Phe	Gly	Gly	Pro	Glu	Asn	Pro	Lys	Leu	Glu	Met
		20					25						30		
Leu	Glu	Lys	Ile	Leu	Gln	Arg	Gln	Phe	Ser	Ser	Ser	Asn	Ser	Pro	Arg
		35				40						45			
Gly	Ile	Ile	Phe	Thr	Arg	Thr	Arg	Gln	Ser	Ala	His	Ser	Leu	Leu	Leu
	50				55					60					
Trp	Leu	Gln	Gln	Gln	Gln	Gly	Leu	Gln	Thr	Val	Asp	Ile	Arg	Ala	Gln
65				70					75						80
Leu	Leu	Ile	Gly	Ala	Gly	Asn	Ser	Ser	Gln	Ser	Thr	His	Met	Thr	Gln
			85						90					95	
Arg	Asp	Gln	Gln	Glu	Val	Ile	Gln	Lys	Phe	Gln	Asp	Gly	Thr	Leu	Asn
			100						105				110		
Leu	Leu	Val	Ala	Thr	Ser	Val	Ala	Glu	Glu	Gly	Leu	Asp	Ile	Pro	His
		115					120					125			
Cys	Asn	Val	Val	Val	Arg	Tyr	Gly	Leu	Leu	Thr	Asn	Glu	Ile	Ser	Met
	130					135					140				
Val	Gln	Ala	Arg	Gly	Arg	Ala	Arg	Ala	Asp	Gln	Ser	Val	Tyr	Ala	Phe
145					150					155					160
Val	Ala	Thr	Glu	Gly	Ser	Arg	Glu	Leu	Lys	Arg	Glu	Leu	Ile	Asn	Glu
			165						170					175	
Ala	Leu	Glu	Thr	Leu	Met	Glu	Gln	Ala	Val	Ala	Ala	Val	Gln	Lys	Met
		180						185					190		
Asp	Gln	Ala	Glu	Tyr	Gln	Ala	Lys	Ile	Arg	Asp	Leu	Gln	Gln	Ala	Ala
		195					200					205			
Leu	Thr	Lys	Arg	Ala	Ala	Gln	Ala	Ala	Gln	Arg	Glu	Asn	Gln	Arg	Gln
	210					215						220			
Gln	Phe	Pro	Val	Glu	His	Val	Gln	Leu	Leu	Cys	Ile	Asn	Cys	Met	Val
225					230					235					240
Ala	Val	Gly	His	Gly	Ser	Asp	Leu	Arg	Lys	Val	Glu	Gly	Thr	His	His
			245						250					255	
Val	Asn	Val	Asn	Pro	Asn	Phe	Ser	Asn	Tyr	Tyr	Asn	Val	Ser	Arg	Asp

260 265 270  
 Pro Val Val Ile Asn Lys Val Phe Lys Asp Trp Lys Pro Gly Gly Val  
 275 280 285  
 Ile Ser Cys Arg Asn Cys Gly Glu Val Trp Gly Leu Gln Met Ile Tyr  
 290 295 300  
 Lys Ser Val Lys Leu Pro Val Leu Lys Val Arg Ser Met Leu Leu Glu  
 305 310 315 320  
 Thr Pro Gln Gly Arg Ile Gln Ala Lys Lys Trp Ser Arg Val Pro Phe  
 325 330 335  
 Ser Val Pro Asp Phe Asp Phe Leu Gln His Cys Ala Glu Asn Leu Ser  
 340 345 350  
 Asp Leu Ser Leu Asp  
 355

&lt;210&gt; 5491

&lt;211&gt; 5555

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5491

nntggcgagg cgggaagcac ccggaatctt cctggcccta gagcctgcag gctccaggcc  
 60  
 ggcccccttga atctcaccgc gaggaaggca ccttgcctgcc tgcacttatt tgcattccaag  
 120  
 agtttgcatt gagactggcg cttgcctact agggcagcca cagggggggtt ccccagggaac  
 180  
 agagattatg tctactttga gaattcctcc agcaacccat acctaataag aaggatagaa  
 240  
 gaactcaaca agactgcaag tggcaacgtg gaagcaaaaag tagtatgctt ttatagacga  
 300  
 cgtgatattt ccaacacact tataatgctc gcagataagc atgctaaaga aattgaggaa  
 360  
 gaatctgaaa caacagttga ggctgacttg accgataagc agaaacatca gttgaaacat  
 420  
 aggggaactct ttttgtcacg ccagtatgaa tctctgcccc caacacatat caggggaaaag  
 480  
 tgcagtgttg cccttctgaa tgagacagaa tcagtattgt catatcttga taaggaggat  
 540  
 accttcttct actcattggt ctatgacccc tcattgaaaa cactattagc tgacaaaggt  
 600  
 gaaatcagag tgggacctag atatcaagca gacattccag aaatgctgtt agaaggagaa  
 660  
 tcagatgaga gggaacaatc aaaattggaa gttaaagttt gggatccaaa tagcccactt  
 720  
 acggatcgac agattgacca gtttttagtt gtagcacgtg ctgttgggac attcgccaga  
 780  
 gccctggatt gcagcagttc tgtgaggcag cctagtttgc atatgagtgc tgctgcagct  
 840  
 tcccagagaca tcaccttgtt tcacgctatg gatacattgt atagacacag ctatgatttg  
 900  
 agcagtgcc aatagtgtctt agtaccactc ggaggacctg ttttatgcag agatgaaatg  
 960  
 gaggaatggt cagcctctga agctagctta tttgaagagg cactggaaaa atatggcaaa  
 1020

gacttcaatg acatacggca agattttctt ccttggaat cattgactag catcattgaa  
1080  
tattattaca tgtggaaaac tactgacaga tatgtgcaac agaaacgtct aaaagcagca  
1140  
gaagctgaga gtaaaactgaa acaagtatat atcccaacct acagcaaacc aaatcccaac  
1200  
caaatatcca ctagtaatgg gaagcctggg gctgtgaatg gagctgtggg gaccacgttc  
1260  
cagcctcaga atcctctctt agggagagcc<sup>a</sup> tgtgagagct gctatgctac acagtctcac  
1320  
cagtgggtatt cttggggccc acctaatatg cagtgtagat tatgtgcaat ttgttggtt  
1380  
tattggaaaa aatatggagg cttgaaaatg cccaccagc cagaagaaga gaagttatct  
1440  
cctagcccaa ctacagagga ccctcgtgtt agaagtcacg tgtcccgcca ggccatgcag  
1500  
ggaatgccag tccgaaacac tgggagtcga aagtctgcag tgaagaccg ccaagctttc  
1560  
ttccttcata ctacatattt cacaaaattt gctcgtcagg tctgcaaaaa taccctccgg  
1620  
ctgcggcagg cagcaagacg gccgtttgtt gctattaatt atgctgcat tagggcagaa  
1680  
tatgccgaca gacatgctga actatctgga agtccactga aaagcaaaag cactaggaag  
1740  
cctttggcat gtatcattgg gtatttagag atccatcctg caaagaaacc taatgtaatt  
1800  
cgatctacac caagcctgca aacccaact accaagcgga tgctaacaac tccaaatcac  
1860  
acatctctga gcattctggg gaaaagaaac tacagtcac acaatggtct ggatgaactc  
1920  
acgtgctgtg tgtcagactg agctttccct gattcattct acaatccaag acttgctgca  
1980  
ctgtcctgct gatgttcaca gccgtgcctg ggaagaaggc agccccactc ccagtacatt  
2040  
tcagtgggag acctctgctg gcatccatgg agacgcaatg gggcggggaa ggaactgtgg  
2100  
gagtgcacgt tccaaatcct gtgtctccac gtgtggatca gcagcacctc gctttcttgt  
2160  
cagagacctc gctgttacgg agcgagacct gctgagaatt gaggggctga gggaaccctc  
2220  
ccacctctc cttctgcag cgccctgcgc cccaccagc aacagcggcc acttggcagt  
2280  
ggggctgctg caagctcaga gccgctgcca ccctgcatgt gtccgctcag ctcggtctta  
2340  
tgctgtatag ttactaaata tgtacaggag ggccatggca tctttctgaa tggatttttc  
2400  
ttaagaaatg cgccagtgtt tatgaggttc aaggatattc cctgtccttg ctgttaccgt  
2460  
cactcagctt tttctcgata ggcttcatcc ttgttttttt gaaatggggg aatttgctgt  
2520  
ttacctctg cattcctata tgtgacctc cctcctactc ctccaaggaa cagaattacc  
2580  
gaggttctga caaaagataa gcctgtaaac tcatcatctg tgttttggg ttggagagaa  
2640

actgggtgttc tgcccggctc tgcttgggtca cagacagctc cagcaagagc agttgttaaa  
2700  
agtgccaaagc gtgtgtatca ctgtgacaag ccgtttgctt actgccctgt tcccttgtag  
2760  
ccaaaccagc tgatgaagaa ctgctgccag gtgggtccta cagcaggtca caaatgacct  
2820  
agtttcattt taagcagaca gactctgttt ggcctagagg tgtggagtga gagaactgtg  
2880  
tttgtgggta tgagtctgtg tggccaaccc catgaccccc accctccag cccaacatct  
2940  
tgtgagcaca tgtgacctag gccccggggg acctgcctgc tcttttggct tgggctcttc  
3000  
gtgtttccca cctgccctcg gcacgagccc ttggtggcat cacagttggc cactcagctg  
3060  
tgctgagtag ctgtgtact tgtgtggca gctgcaagga taggaatagc tcagcgcccc  
3120  
atgagctccc tgagcagatg tgaggctggc aactccccctg ccctctgttt gcaggcacag  
3180  
ggtcacagtc ccaagaaaga caactggagt ctgatctccc agccatctct ggggttacta  
3240  
ggaggcagct ggatggcaga tacgagaggc ccaaatagcc aagctgttgc aagacagagt  
3300  
ggctacaatt gaattgacac cctgggaagc acgaggtaac ttggttaagga taatgatgct  
3360  
gtagatgtct gtgtcctcgg aggctgagct ccgcttggca gagagagcgt gctgtgtgag  
3420  
gtggagggcg gttttgcaga catctcagct tcttttctga ggaggagttg gttctcatct  
3480  
taggcttctg caagggcgag catgggatgt ctccaccacc acccactctt ggagctgtgc  
3540  
tgggtcttgg cttggggcgc tgagggtggg gcctgtgtca gaagcatttg gtgagagggg  
3600  
tggaggtggc aggcaggggt tctcctcagg gtcccaactg aggggtccct tcagcaaaga  
3660  
cctgggagga ggtgccgcat cacgtggatg tttcttccct aaagaaaaag acacaggaaa  
3720  
gctgtctgtc tgtaccctgc tctggattta ttgtcgtact tggaccaga aggggaaatg  
3780  
attccctcac cctttcactt tctctctgaa ccctactaa gtggtgactg cagattctgg  
3840  
aaacaattag ctgccctga ctcagctgcc agcttcattt tctctgcctt ttgggagagg  
3900  
ccctctcac caggccaag agatttggag acaggagtca ggccaggtct gaagcaggag  
3960  
aagggaggcc cctcctatct acccagttga catttggctt tgggaaaagc gcagcttgtt  
4020  
cgagccacgt gtgccaagca ggcttttctt tctcttga agtaaagctc gtggttctgt  
4080  
agtccagtc tctaggagg gtgatgttga ctgagactc acgtctccc tttgtctctg  
4140  
gaaactgccc cctcgttctg acagaatccc ccaggcaatg gaggaagggt gccgaggcgc  
4200  
ctctagtctg tgcctttgcc gttggaagca tttggtgctg agagggtttc ccagccccc  
4260



gctccctttc tggggccatg gtgtccctgc tgtgtgtcag tggcatgtca ctgtggttca  
4320  
gtgagcacat gggtaggacgt gcagagactg tctgcgcagc cccagcaga catgccctg  
4380  
gggtgaggac acaggctctg caggctatct cccctctgg ctcatcatc gcctgccac  
4440  
ccttcacttc ttaaagggtgc gcaagagagg agggccgact ggagggtgtc gccggaagg  
4500  
ttcagcctgc ccttcacaat tccccttggtg cacagcccag ttccatctc tcagggccca  
4560  
cccaggaaaa tggatttcaa gtggggggttt tcatccagag atttgtttaa cacaaaaca  
4620  
gaaaagctga gaggcaaac aggggagtga ggggcaacc agagggtggg aacaacaaca  
4680  
gcaagccgcc cccatcctgt gactggctgg gcaccagggg aggacgcgtc accagagcct  
4740  
ggggccaagg cactggggg acctgccaca ctgtggacct gtctgggtgg ggctggagcc  
4800  
tcgagaagcc atgattcttg tcagaaacat tccccaggc agagagaggg ggccccagcc  
4860  
tctccctcc tcttggcctc cagagtcctg cagggtgcctc acagtagtga aaccagttg  
4920  
gaagcagctg ccctgggagc ctgggacagg cgaccaccg ggtcagtcct ctgccactca  
4980  
gagcagagca gggggctgag ggcaagcagg tggggctgtg cgtggcctca gtgcactcgg  
5040  
tgtcatgtct gagcctggtg tttatgcccc actgctgtcc taagtccctg gcgaggggag  
5100  
gtggaggagc tgccccgtgg gtgtttggag attctgtttt actctgccta gagaggaaac  
5160  
ggctttggg agggagggg aagcctttat tctttactgt tgtccctgtt ttcctttggg  
5220  
ggaatttact cagttagcag cccctcctca ccattcccc caggaaggcc atgtcccagt  
5280  
tttctgtcca cccctcctgt tctctgcac tatgtctctg atttccctg ccagggaagc  
5340  
taaccagag cacgcacctg tgctcatgag tgtttccgca ggataattcg ttctgagcat  
5400  
gataccacag tgtggattgt ctgtctgtaa ggagatgcca tctactaacc aatttgatt  
5460  
gtgtttccaa taaattcctg gaaattttgc ctggttttat gctgttcttt actaggatga  
5520  
tggctcaggt gtaagactgt gcacgcaccc ctagg  
5555

&lt;210&gt; 5492

&lt;211&gt; 602

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5492

Asp	Trp	Arg	Leu	Pro	Thr	Arg	Ala	Ala	Thr	Gly	Gly	Phe	Pro	Arg	Asp
1			5					10					15		
Arg	Asp	Tyr	Val	Tyr	Phe	Glu	Asn	Ser	Ser	Ser	Asn	Pro	Tyr	Leu	Ile

20															25					30				
Arg	Arg	Ile	Glu	Glu	Leu	Asn	Lys	Thr	Ala	Ser	Gly	Asn	Val	Glu	Ala									
35						40						45												
Lys	Val	Val	Cys	Phe	Tyr	Arg	Arg	Arg	Asp	Ile	Ser	Asn	Thr	Leu	Ile									
50						55			60															
Met	Leu	Ala	Asp	Lys	His	Ala	Lys	Glu	Ile	Glu	Glu	Glu	Ser	Glu	Thr									
65			70			75			80															
Thr	Val	Glu	Ala	Asp	Leu	Thr	Asp	Lys	Gln	Lys	His	Gln	Leu	Lys	His									
			85			90			95															
Arg	Glu	Leu	Phe	Leu	Ser	Arg	Gln	Tyr	Glu	Ser	Leu	Pro	Ala	Thr	His									
			100			105			110															
Ile	Arg	Gly	Lys	Cys	Ser	Val	Ala	Leu	Leu	Asn	Glu	Thr	Glu	Ser	Val									
115						120			125															
Leu	Ser	Tyr	Leu	Asp	Lys	Glu	Asp	Thr	Phe	Phe	Tyr	Ser	Leu	Val	Tyr									
130			135			140			145															
Asp	Pro	Ser	Leu	Lys	Thr	Leu	Leu	Ala	Asp	Lys	Gly	Glu	Ile	Arg	Val									
145			150			155			160															
Gly	Pro	Arg	Tyr	Gln	Ala	Asp	Ile	Pro	Glu	Met	Leu	Leu	Glu	Gly	Glu									
			165			170			175															
Ser	Asp	Glu	Arg	Glu	Gln	Ser	Lys	Leu	Glu	Val	Lys	Val	Trp	Asp	Pro									
180			185			190			195															
Asn	Ser	Pro	Leu	Thr	Asp	Arg	Gln	Ile	Asp	Gln	Phe	Leu	Val	Val	Ala									
195			200			205			210															
Arg	Ala	Val	Gly	Thr	Phe	Ala	Arg	Ala	Leu	Asp	Cys	Ser	Ser	Ser	Val									
210			215			220			225															
Arg	Gln	Pro	Ser	Leu	His	Met	Ser	Ala	Ala	Ala	Ala	Ser	Arg	Asp	Ile									
225			230			235			240															
Thr	Leu	Phe	His	Ala	Met	Asp	Thr	Leu	Tyr	Arg	His	Ser	Tyr	Asp	Leu									
			245			250			255															
Ser	Ser	Ala	Ile	Ser	Val	Leu	Val	Pro	Leu	Gly	Gly	Pro	Val	Leu	Cys									
260			265			270			275															
Arg	Asp	Glu	Met	Glu	Glu	Trp	Ser	Ala	Ser	Glu	Ala	Ser	Leu	Phe	Glu									
275			280			285			290															
Glu	Ala	Leu	Glu	Lys	Tyr	Gly	Lys	Asp	Phe	Asn	Asp	Ile	Arg	Gln	Asp									
290			295			300			305															
Phe	Leu	Pro	Trp	Lys	Ser	Leu	Thr	Ser	Ile	Ile	Glu	Tyr	Tyr	Tyr	Met									
305			310			315			320															
Trp	Lys	Thr	Thr	Asp	Arg	Tyr	Val	Gln	Gln	Lys	Arg	Leu	Lys	Ala	Ala									
			325			330			335															
Glu	Ala	Glu	Ser	Lys	Leu	Lys	Gln	Val	Tyr	Ile	Pro	Thr	Tyr	Ser	Lys									
340			345			350			355															
Pro	Asn	Pro	Asn	Gln	Ile	Ser	Thr	Ser	Asn	Gly	Lys	Pro	Gly	Ala	Val									
355			360			365			370															
Asn	Gly	Ala	Val	Gly	Thr	Thr	Phe	Gln	Pro	Gln	Asn	Pro	Leu	Leu	Gly									
370			375			380			385															
Arg	Ala	Cys	Glu	Ser	Cys	Tyr	Ala	Thr	Gln	Ser	His	Gln	Trp	Tyr	Ser									
385			390			395			400															
Trp	Gly	Pro	Pro	Asn	Met	Gln	Cys	Arg	Leu	Cys	Ala	Ile	Cys	Trp	Leu									
			405			410			415															
Tyr	Trp	Lys	Lys	Tyr	Gly	Gly	Leu	Lys	Met	Pro	Thr	Gln	Ser	Glu	Glu									
420			425			430			435															
Glu	Lys	Leu	Ser	Pro	Ser	Pro	Thr	Thr	Glu	Asp	Pro	Arg	Val	Arg	Ser									
435			4																					

450	455	460
Ser Pro Lys Ser Ala Val Lys Thr Arg Gln Ala Phe Phe Leu His Thr		
465	470	475
Thr Tyr Phe Thr Lys Phe Ala Arg Gln Val Cys Lys Asn Thr Leu Arg		480
	485	490
Leu Arg Gln Ala Ala Arg Arg Pro Phe Val Ala Ile Asn Tyr Ala Ala		495
	500	505
Ile Arg Ala Glu Tyr Ala Asp Arg His Ala Glu Leu Ser Gly Ser Pro		510
	515	520
Leu Lys Ser Lys Ser Thr Arg Lys Pro Leu Ala Cys Ile Ile Gly Tyr		525
	530	535
Leu Glu Ile His Pro Ala Lys Lys Pro Asn Val Ile Arg Ser Thr Pro		540
545	550	555
Ser Leu Gln Thr Pro Thr Thr Lys Arg Met Leu Thr Thr Pro Asn His		560
	565	570
Thr Ser Leu Ser Ile Leu Gly Lys Arg Asn Tyr Ser His His Asn Gly		575
	580	585
Leu Asp Glu Leu Thr Cys Cys Val Ser Asp		590
595	600	

<210> 5493  
 <211> 6538  
 <212> DNA  
 <213> Homo sapiens

<400> 5493  
 nncttctga cggcgcgcg cagcctgctg ccgcggtcag cgcctgctcc tgctcctcgg  
 60  
 ctctctctgc gcggggtgct gaaacagccc ggggaagtag agccgcctcc ggggagccca  
 120  
 accagccgaa cgccgcccgc gtcagcagcc ttgcgcggcc acagcatgac cgctcgcggc  
 180  
 ctggcccttg gcctctcct gctgctactg tgtccagcgc aggtgttttc acagtccctgt  
 240  
 gtttggtatg gagagtgtgg aattgcatat ggggacaaga ggtacaattg cgaatattct  
 300  
 ggcccaccaa aaccattgcc aaaggatgga tatgacttag tgcaggaact ctgtccagga  
 360  
 ttcttctttg gcaatgtcag tctctgttgt gatgttcggc agcttcagac actaaaagac  
 420  
 aacctgcagc tgctctaca gtttctgtcc agatgtccat cctgttttta taacctactg  
 480  
 aacctgtttt gtgagctgac atgtagccct cgacagagtc agtttttgaa tgttacagct  
 540  
 actgaagatt atgttgatcc tgttacaaac cagacgaaaa caaatgtgaa agagttacaa  
 600  
 tactacgtcg gacagagttt tgccaatgca atgtacaatg cctgccggga tgtggaggcc  
 660  
 ccctcaagta atgacaaggc cctgggactc ctgtgtggga aggacgctga cgcctgtaat  
 720  
 gccaccaact ggattgaata catgttcaat aaggacaatg gacaggcacc ttttaccatc  
 780  
 actcctgtgt tttcagattt tccagtccat gggatggagc ccatgaacaa tgccaccaa  
 840

ggctgtgacg agtctgtgga tgaggtcaca gcaccatgta gctgccaaga ctgctctatt  
900  
gtctgtggcc ccaagcccca gccccacct cctcctgctc cctggacgat ccttggttg  
960  
gacgccatgt atgtcatcat gtggatcacc tacatggcgt ttttgcttgt gttttttgga  
1020  
gcattttttg cagtgtggtg ctacagaaaa cggtatTTTt tctccgagta cactcccatc  
1080  
gatagcaata tagctttttc tgttaatgca agtgacaaaag gagaggcgtc ctgctgtgac  
1140  
cctgtcagcg cagcatttga gggctgcttg aggcggctgt tcacacgctg ggggtcttcc  
1200  
tgcgtccgaa accctggctg tgtcattttc ttctcgttg tcttcattac tgcgtgttcg  
1260  
tcaggcctgg tgtttgtccg ggtcacaacc aatccagttg acctctggtc agccccagc  
1320  
agccaggctc gcctggaaaa agagtacttt gaccagcact ttgggccttt ctcccgacg  
1380  
gagcagctca tcatccgggc ccctctcact gacaaacaca tttaccagcc atacccttcg  
1440  
ggagctgatg taccctttgg acctccgctt gacatacaga tactgcacca ggttcttgac  
1500  
ttacaaatag ccatcgaaaa cattactgcc tcttatgaca atgagactgt gacacttcaa  
1560  
gacatctgct tggccctctt ttcaccgat aacacgaact gcaccatttt gagtgtgtta  
1620  
aattacttcc agaacagcca ttccgtgctg gaccacaaga aaggggacga cttctttgtg  
1680  
tatgccgatt accacacgca ctttctgtac tgcgtacggg ctctgcctc tctgaatgat  
1740  
acaagtttgc tccatgaccc ttgtctgggt acgtttgggt gaccagtgtt ccggtggctt  
1800  
gtgttgggag gctatgatga tcaaaactac aataacgcca ctgcccttgt gattaccttc  
1860  
cctgtcaata attactataa tgatacagag aagctccaga gggcccaggc ctgggaaaaa  
1920  
gagtttatta attttgtgaa aaactacaag aatcccaatc tgaccatttc cttcactgct  
1980  
gaacgaagta ttgaagatga actaaatcgt gaaagtgaca gtgatgtctt caccgttgta  
2040  
attagctatg ccatcatgtt tctatatatt tccctagcct tggggcacat caaaagctgt  
2100  
cgcaggcttc tgggtggattc gaaggctcct ctaggcacgt cgggcatctt gatcgtgctg  
2160  
agctcgggtg cttgtctcctt ggggtgtctc agctacattg gggtgccctt gaccctcatt  
2220  
gtgattgaag tcatcccggt cctgggtgctg gctgttggag tggacaacat cttcattctg  
2280  
gtgcaggcct accagagaga tgaacgtctt caaggggaaa ccctggatca gcagctgggc  
2340  
agggtcctag gagaagtggc tcccagtatg ttctgtcat ccttttctga gactgtagca  
2400  
tttttcttag gagcattgtc cgtgatgcca gccgtgcaca ccttctctct ctttgcgga  
2460

ttggcagtct tcattgactt tcttctgcag attacctgtt tcgtgagtct cttgggggta  
2520  
gacattaaac gtcaagagaa aaatcggcta gacatctttt gctgtgtcag aggtgctgaa  
2580  
gatggaacaa gcgtccaggc ctcagagagc tgtttgtttc gcttcttcaa aaactcctat  
2640  
tctccacttc tgctaaagga ctggatgaga ccaattgtga tagcaatatt tgtgggtgtt  
2700  
ctgtcattca gcacgcagc cctgaacaaa gtagatattg gattggatca gtctctttcg  
2760  
atgccagatg actcctacat ggtggattat ttcaaatacca tcagtcagta cctgcacgag  
2820  
ggtccgcctg tgtactttgt cctggaggaa gggcacgact acacttcttc caaggggcag  
2880  
aacatggtgt gcggcgcat gggctgcaac aatgattccc tggcgcagca gatatttaac  
2940  
gcggcgagc tggacaatta taccgaata ggcttcgccc cctcgtcctg gatcgacgat  
3000  
tatttcgact ggggtgaagcc acagtcgtct tgcgtcgcag tggacaatat cactgaccag  
3060  
ttctgcaatg cttcagtgtt tgacctgcc tgcgttcgct gcaggcctct gactccggga  
3120  
ggcaaacaga ggctcaggg gggagacttc atgagattcc tgcccatgtt cctttcggat  
3180  
aacctaacc ccaagtgtg ccaaggggga catgctgcct atagttctgc agttaacatc  
3240  
ctccttgccc atggcaccag ggtcggagcc acgtacttca tgacctacca caccgtgctg  
3300  
cagacctctg ctgactttat tgacgtctg aagaaagccc gacttatagc cagtaatgtc  
3360  
accgaaacca tgggcattaa cggcagtgcc taccgagtat ttccttacag tgtgttttat  
3420  
gtcttctacg aacagtacct gaccatcatt gacgacacta tcttcaacct cgggtgtgtc  
3480  
ctgggcgga tatttctggt gaccatggtc ctcctgggct gtgagctctg gtctgcagtc  
3540  
atcatgtgtg ccaccatcgc catggtcttg gtcaacatgt ttggagttat gtggctctgg  
3600  
ggcatcagtc tgaacgctgt atccttggtc aacctggtga tgagctgtgg catctccgtg  
3660  
gagttctgca gccacataac cagagcgctt acggtgagca tgaaaggcag ccgcgtggag  
3720  
cgcgcggaag aggcacttgc ccacatgggc agctccgtgt tcagtggaat cacacttaca  
3780  
aaatttggag ggattgtggt gttggctttt gccaaatctc aaattttcca gatattctac  
3840  
ttcaggatgt atttggccat ggtcttactg ggagccactc acggattaat atttctccct  
3900  
gtcttactca gttacatagg gccatcagta aataaagcca aaagttgtgc cactgaagag  
3960  
cgatacaaag gaacagagcg cgaacggctt cttaaatttct agccctctcg cagggcatcc  
4020  
tgactgaact gtgtctaagg gtcggtcggg ttaccactgg acgggtgctg catcggaag  
4080

gccaaagtga acaccgatg gtgccaacca tcggttggtt ggcagcagct ttgaacgtag  
4140  
cgcttgtaa ctcaggaatg cacagttgac ttgggaagca gtattactag atctggaggc  
4200  
aaccacagga cactaaactt ctcccagcct cttcaggaaa gaaacctcat tctttggcaa  
4260  
gcaggagggtg acactagatg gctgtgaatg tgatccgctc actgacactc tgtaaaggcc  
4320  
aatcaatgca ctgtctgtct ctcttttttag gagtaagcca tcccacaagt tctataccat  
4380  
attttttagt acagttgagg ttgtagatac actttataac attttatagt ttaaagagct  
4440  
ttattaatgc aataaattaa ctttgtacac atttttatat aaaaaaacag caagtgattt  
4500  
cagaatgttg taggcctcat tagagcttgg tctccaaaaa tctgtttgaa aaaagcaaca  
4560  
tgttcttcac agtggtcccc tgggtgtgaaa ttggggctcc ctgcgaaacg ctggtttcgc  
4620  
tgttcaaaaa agcggaaatat tgtatagaaa agcatgttgt cttcagctctg ctttgcagca  
4680  
tctaaaaatt ttcgtgcaga aatgttgtca tggccaccaa tgccccgat aaaccttaag  
4740  
gcagctaaca cttggtgttt ggaaaggaga acttctacta tttcatcatt tgctgttgaa  
4800  
agtcgcttca gcatgtccag agatagctga tgagcaggag gatagaaact ctctagggat  
4860  
aacagcagac aagccaaagg tttggagtcg ctgaggacgt ggtactgcag gaactgatgc  
4920  
agcatataaa agaggttgtg ctggacaagg gttttgataa caagttcatg taggtaatgc  
4980  
tgtactgcaa tctgaaactg gttaagagaa cgaatgtatt ccatcagcac ggctatcaca  
5040  
aatttatgag gcatctcctt cttttgccga tagtgtttaa atactccgta gaggaagaaa  
5100  
tccacgaagg ctgacaggac atgggtgtac acatctgact ggtccagcac cgctgggtc  
5160  
cgaccggcc tcttgaggag cgggctgctt cggctctgcc ctgcttcac cgccatcgca  
5220  
taactctgct cggcatccag gtacttttta tactcatggt tgagtttatc aaaaacagtg  
5280  
gctatcacgg gcagcgatgc tctgtctgac tcacttaaca tctgtgaaca gacagacagg  
5340  
atgaccatct tgcattcctt tctctggagg agaaagtcca tgagtcttcc tttgtctggt  
5400  
aagagattta ctatgggctc aagtttctact tggaggttcc agaggtaacc ttggcttgcg  
5460  
ctgataatga tgtcagggtg aaagacaatc caagatgaag aatagagttt acatggaaca  
5520  
ggagactggc tggtcacggc agcaggacct gtgatgggga tctgataggg ctggatcgat  
5580  
cgagcgggaa gcacgggggtg gtggaaggta acggagccgt caaactctcc ccgtaacttg  
5640  
atatgaata ttaccgatgt ctctgtatcc tgatgatgca cgactaccag gttgtccacc  
5700

acgttcaggc caaactttcc cgtcctatct aacttcaata tgtgcatctt ttacaggca  
 5760  
 ccttctcgtg gtagatgata gaggaccacc tccgctcctg tgctgttgga ggtccgagaa  
 5820  
 tgatgcctca agaagagaac atacagctgc ccgtatatgg tagccattgc gatgtctctt  
 5880  
 tcggaaaggc tgggttttagt tgacttaggc gcagctggta attcaatctc aaatttgggc  
 5940  
 agcttcgaca tagtgccagc cctaaagtga aaaggctgca ggacattctc caggaccgtg  
 6000  
 gtagacagca agatcacggc gctctcgggg cagtacatgt accaattcac attgagattg  
 6060  
 tggtctctca agagtttcag actccgtttc tctggtaata cctggtaaaa ttcgattcct  
 6120  
 tgatctgtta tgaagacaat ttcagttgaa ctagtccagc agaatcctag aatgttgcca  
 6180  
 ttcttagtct tgcactcctg tgtgtattcc agctgggaat tatcagggat aaaattacaa  
 6240  
 aaatccacag tctttgaggt cctctgaaca gccaatatct tattttctaa ggaaaactta  
 6300  
 atgcacttca cttctccttt gtcattcatt ctaaagtaga tgggattcct atcatctggg  
 6360  
 cctttaacta ccacgccagt agctccacca gatcgaacag caaaaacctg cttgttgccc  
 6420  
 tcattgaaga agacgcagtt gacagggttc gccttctcga actgcaccgg ccgctcgcac  
 6480  
 agctccagat agtagtctc ctcgcccatt gcgggcgcgg cgcccgcggc gggggccc  
 6538

&lt;210&gt; 5494

&lt;211&gt; 1278

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5494

Met Thr Ala Arg Gly Leu Ala Leu Gly Leu Leu Leu Leu Leu Cys  
 1 5 10 15  
 Pro Ala Gln Val Phe Ser Gln Ser Cys Val Trp Tyr Gly Glu Cys Gly  
 20 25 30  
 Ile Ala Tyr Gly Asp Lys Arg Tyr Asn Cys Glu Tyr Ser Gly Pro Pro  
 35 40 45  
 Lys Pro Leu Pro Lys Asp Gly Tyr Asp Leu Val Gln Glu Leu Cys Pro  
 50 55 60  
 Gly Phe Phe Phe Gly Asn Val Ser Leu Cys Cys Asp Val Arg Gln Leu  
 65 70 75 80  
 Gln Thr Leu Lys Asp Asn Leu Gln Leu Pro Leu Gln Phe Leu Ser Arg  
 85 90 95  
 Cys Pro Ser Cys Phe Tyr Asn Leu Leu Asn Leu Phe Cys Glu Leu Thr  
 100 105 110  
 Cys Ser Pro Arg Gln Ser Gln Phe Leu Asn Val Thr Ala Thr Glu Asp  
 115 120 125  
 Tyr Val Asp Pro Val Thr Asn Gln Thr Lys Thr Asn Val Lys Glu Leu  
 130 135 140  
 Gln Tyr Tyr Val Gly Gln Ser Phe Ala Asn Ala Met Tyr Asn Ala Cys

145		150		155		160									
Arg	Asp	Val	Glu	Ala	Pro	Ser	Ser	Asn	Asp	Lys	Ala	Leu	Gly	Leu	Leu
		165						170						175	
Cys	Gly	Lys	Asp	Ala	Asp	Ala	Cys	Asn	Ala	Thr	Asn	Trp	Ile	Glu	Tyr
		180						185						190	
Met	Phe	Asn	Lys	Asp	Asn	Gly	Gln	Ala	Pro	Phe	Thr	Ile	Thr	Pro	Val
		195						200						205	
Phe	Ser	Asp	Phe	Pro	Val	His	Gly	Met	Glu	Pro	Met	Asn	Asn	Ala	Thr
		210					215							220	
Lys	Gly	Cys	Asp	Glu	Ser	Val	Asp	Glu	Val	Thr	Ala	Pro	Cys	Ser	Cys
		225				230					235				240
Gln	Asp	Cys	Ser	Ile	Val	Cys	Gly	Pro	Lys	Pro	Gln	Pro	Pro	Pro	Pro
			245						250					255	
Pro	Ala	Pro	Trp	Thr	Ile	Leu	Gly	Leu	Asp	Ala	Met	Tyr	Val	Ile	Met
			260					265						270	
Trp	Ile	Thr	Tyr	Met	Ala	Phe	Leu	Leu	Val	Phe	Phe	Gly	Ala	Phe	Phe
		275					280						285		
Ala	Val	Trp	Cys	Tyr	Arg	Lys	Arg	Tyr	Phe	Val	Ser	Glu	Tyr	Thr	Pro
		290				295					300				
Ile	Asp	Ser	Asn	Ile	Ala	Phe	Ser	Val	Asn	Ala	Ser	Asp	Lys	Gly	Glu
		305				310				315					320
Ala	Ser	Cys	Cys	Asp	Pro	Val	Ser	Ala	Ala	Phe	Glu	Gly	Cys	Leu	Arg
			325						330					335	
Arg	Leu	Phe	Thr	Arg	Trp	Gly	Ser	Phe	Cys	Val	Arg	Asn	Pro	Gly	Cys
			340					345					350		
Val	Ile	Phe	Phe	Ser	Leu	Val	Phe	Ile	Thr	Ala	Cys	Ser	Ser	Gly	Leu
		355					360						365		
Val	Phe	Val	Arg	Val	Thr	Thr	Asn	Pro	Val	Asp	Leu	Trp	Ser	Ala	Pro
		370				375					380				
Ser	Ser	Gln	Ala	Arg	Leu	Glu	Lys	Glu	Tyr	Phe	Asp	Gln	His	Phe	Gly
		385				390				395					400
Pro	Phe	Phe	Arg	Thr	Glu	Gln	Leu	Ile	Ile	Arg	Ala	Pro	Leu	Thr	Asp
			405						410					415	
Lys	His	Ile	Tyr	Gln	Pro	Tyr	Pro	Ser	Gly	Ala	Asp	Val	Pro	Phe	Gly
		420						425					430		
Pro	Pro	Leu	Asp	Ile	Gln	Ile	Leu	His	Gln	Val	Leu	Asp	Leu	Gln	Ile
		435					440					445			
Ala	Ile	Glu	Asn	Ile	Thr	Ala	Ser	Tyr	Asp	Asn	Glu	Thr	Val	Thr	Leu
		450				455					460				
Gln	Asp	Ile	Cys	Leu	Ala	Pro	Leu	Ser	Pro	Tyr	Asn	Thr	Asn	Cys	Thr
		465				470				475					480
Ile	Leu	Ser	Val	Leu	Asn	Tyr	Phe	Gln	Asn	Ser	His	Ser	Val	Leu	Asp
			485						490					495	
His	Lys	Lys	Gly	Asp	Asp	Phe	Phe	Val	Tyr	Ala	Asp	Tyr	His	Thr	His
			500					505					510		
Phe	Leu	Tyr	Cys	Val	Arg	Ala	Pro	Ala	Ser	Leu	Asn	Asp	Thr	Ser	Leu
		515					520					525			
Leu	His	Asp	Pro	Cys	Leu	Gly	Thr	Phe	Gly	Gly	Pro	Val	Phe	Pro	Trp
		530				535					540				
Leu	Val	Leu	Gly	Gly	Tyr	Asp	Asp	Gln	Asn	Tyr	Asn	Asn	Ala	Thr	Ala
		545				550				555					560
Leu	Val	Ile	Thr	Phe	Pro	Val	Asn	Asn	Tyr	Tyr	Asn	Asp	Thr	Glu	Lys
			565					570						575	
Leu	Gln	Arg	Ala	Gln	Ala	Trp	Glu	Lys	Glu	Phe	Ile	Asn	Phe	Val	Lys



580							585					590				
Asn	Tyr	Lys	Asn	Pro	Asn	Leu	Thr	Ile	Ser	Phe	Thr	Ala	Glu	Arg	Ser	
595							600					605				
Ile	Glu	Asp	Glu	Leu	Asn	Arg	Glu	Ser	Asp	Ser	Asp	Val	Phe	Thr	Val	
610							615					620				
Val	Ile	Ser	Tyr	Ala	Ile	Met	Phe	Leu	Tyr	Ile	Ser	Leu	Ala	Leu	Gly	
625							630					635				
His	Ile	Lys	Ser	Cys	Arg	Arg	Leu	Leu	Val	Asp	Ser	Lys	Val	Ser	Leu	
645							650					655				
Gly	Ile	Ala	Gly	Ile	Leu	Ile	Val	Leu	Ser	Ser	Val	Ala	Cys	Ser	Leu	
660							665					670				
Gly	Val	Phe	Ser	Tyr	Ile	Gly	Leu	Pro	Leu	Thr	Leu	Ile	Val	Ile	Glu	
675							680					685				
Val	Ile	Pro	Phe	Leu	Val	Leu	Ala	Val	Gly	Val	Asp	Asn	Ile	Phe	Ile	
690							695					700				
Leu	Val	Gln	Ala	Tyr	Gln	Arg	Asp	Glu	Arg	Leu	Gln	Gly	Glu	Thr	Leu	
705							710					715				
Asp	Gln	Gln	Leu	Gly	Arg	Val	Leu	Gly	Glu	Val	Ala	Pro	Ser	Met	Phe	
725							730					735				
Leu	Ser	Ser	Phe	Ser	Glu	Thr	Val	Ala	Phe	Phe	Leu	Gly	Ala	Leu	Ser	
740							745					750				
Val	Met	Pro	Ala	Val	His	Thr	Phe	Ser	Leu	Phe	Ala	Gly	Leu	Ala	Val	
755							760					765				
Phe	Ile	Asp	Phe	Leu	Leu	Gln	Ile	Thr	Cys	Phe	Val	Ser	Leu	Leu	Gly	
770							775					780				
Leu	Asp	Ile	Lys	Arg	Gln	Glu	Lys	Asn	Arg	Leu	Asp	Ile	Phe	Cys	Cys	
785							790					795				
Val	Arg	Gly	Ala	Glu	Asp	Gly	Thr	Ser	Val	Gln	Ala	Ser	Glu	Ser	Cys	
805							810					815				
Leu	Phe	Arg	Phe	Phe	Lys	Asn	Ser	Tyr	Ser	Pro	Leu	Leu	Leu	Lys	Asp	
820							825					830				
Trp	Met	Arg	Pro	Ile	Val	Ile	Ala	Ile	Phe	Val	Gly	Val	Leu	Ser	Phe	
835							840					845				
Ser	Ile	Ala	Val	Leu	Asn	Lys	Val	Asp	Ile	Gly	Leu	Asp	Gln	Ser	Leu	
850							855					860				
Ser	Met	Pro	Asp	Asp	Ser	Tyr	Met	Val	Asp	Tyr	Phe	Lys	Ser	Ile	Ser	
865							870					875				
Gln	Tyr	Leu	His	Ala	Gly	Pro	Pro	Val	Tyr	Phe	Val	Leu	Glu	Glu	Gly	
885							890					895				
His	Asp	Tyr	Thr	Ser	Ser	Lys	Gly	Gln	Asn	Met	Val	Cys	Gly	Gly	Met	
900							905					910				
Gly	Cys	Asn	Asn	Asp	Ser	Leu	Val	Gln	Gln	Ile	Phe	Asn	Ala	Ala	Gln	
915							920					925				
Leu	Asp	Asn	Tyr	Thr	Arg	Ile	Gly	Phe	Ala	Pro	Ser	Ser	Trp	Ile	Asp	
930							935					940				
Asp	Tyr	Phe	Asp	Trp	Val	Lys	Pro	Gln	Ser	Ser	Cys	Cys	Arg	Val	Asp	
945							950					955				
Asn	Ile	Thr	Asp	Gln	Phe	Cys	Asn	Ala	Ser	Val	Val	Asp	Pro	Ala	Cys	
965							970					975				
Val	Arg	Cys	Arg	Pro	Leu	Thr	Pro	Gly	Gly	Lys	Gln	Arg	Pro	Gln	Gly	
980							985					990				
Gly	Asp	Phe	Met	Arg	Phe	Leu	Pro	Met	Phe	Leu	Ser	Asp	Asn	Pro	Asn	
995							1000					1005				
Pro	Lys	Cys	Gly	Lys	Gly	Gly	His	Ala	Ala	Tyr	Ser	Ser	Ala	Val	Asn	

1010 1015 1020  
 Ile Leu Leu Gly His Gly Thr Arg Val Gly Ala Thr Tyr Phe Met Thr  
 1025 1030 1035 1040  
 Tyr His Thr Val Leu Gln Thr Ser Ala Asp Phe Ile Asp Ala Leu Lys  
 1045 1050 1055  
 Lys Ala Arg Leu Ile Ala Ser Asn Val Thr Glu Thr Met Gly Ile Asn  
 1060 1065 1070  
 Gly Ser Ala Tyr Arg Val Phe Pro Tyr Ser Val Phe Tyr Val Phe Tyr  
 1075 1080 1085  
 Glu Gln Tyr Leu Thr Ile Ile Asp Asp Thr Ile Phe Asn Leu Gly Val  
 1090 1095 1100  
 Ser Leu Gly Ala Ile Phe Leu Val Thr Met Val Leu Leu Gly Cys Glu  
 1105 1110 1115 1120  
 Leu Trp Ser Ala Val Ile Met Cys Ala Thr Ile Ala Met Val Leu Val  
 1125 1130 1135  
 Asn Met Phe Gly Val Met Trp Leu Trp Gly Ile Ser Leu Asn Ala Val  
 1140 1145 1150  
 Ser Leu Val Asn Leu Val Met Ser Cys Gly Ile Ser Val Glu Phe Cys  
 1155 1160 1165  
 Ser His Ile Thr Arg Ala Phe Thr Val Ser Met Lys Gly Ser Arg Val  
 1170 1175 1180  
 Glu Arg Ala Glu Glu Ala Leu Ala His Met Gly Ser Ser Val Phe Ser  
 1185 1190 1195 1200  
 Gly Ile Thr Leu Thr Lys Phe Gly Gly Ile Val Val Leu Ala Phe Ala  
 1205 1210 1215  
 Lys Ser Gln Ile Phe Gln Ile Phe Tyr Phe Arg Met Tyr Leu Ala Met  
 1220 1225 1230  
 Val Leu Leu Gly Ala Thr His Gly Leu Ile Phe Leu Pro Val Leu Leu  
 1235 1240 1245  
 Ser Tyr Ile Gly Pro Ser Val Asn Lys Ala Lys Ser Cys Ala Thr Glu  
 1250 1255 1260  
 Glu Arg Tyr Lys Gly Thr Glu Arg Glu Arg Leu Leu Asn Phe  
 1265 1270 1275

&lt;210&gt; 5495

&lt;211&gt; 2414

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5495

agacctgcac cgggccaggc aagatggcgg ccatggagac cgagacggcg ccgctgaccc  
 60  
 tagagtgcgt gccaccgat cccctgctcc tcattcttacc ctttttggac tatcgggac  
 120  
 taatcaactg ttgttatgtc agtcgaagac ttagccagct atcaagtcac gatccgctgt  
 180  
 ggagaagaca ttgcaaaaaa tactggctga tatctgagga agagaaaaca cagaagaatc  
 240  
 agtgttgga atctctcttc atagatactt actctgatgt aggaagatac attgaccatt  
 300  
 atgctgctat taaaaaggcc tgggatgac tcaagaaata tttggagccc aggtgtcctc  
 360  
 ggatggtttt atctctgaaa gaggggtgctc gagaggaaga cctcgatgct gtggaagcgc  
 420

agattgggct gcaagtttcc tggacgatta tcgatgttca taccgaattc acaatggaca  
480  
gaagttagtt ggttcctggg gttattggga agcatggcac tgtctaataca ctatcgttct  
540  
gaagatttgt tagacgtcga tacagctgcc ggaggattcc agcagagaca gggactgaaa  
600  
tactgtctcc ctttaacttt ttgcatacat actggtttga gtcagtacat agcagtggaa  
660  
gctgcagagg gccgaaacaa aaatgaagtt ttctaccaat gtccagacca aatggctcga  
720  
aatccagctg ctattgacat gtttattata ggtgctactt ttactgactg gtttacctct  
780  
tatgtcaaaa atgttgatc aggtggcttc cccatcatca gagaccaaatt tttcagatat  
840  
gttcacgatc cagaatgtgt agcaacaact ggggatatta ctgtgtcagt ttccacatcg  
900  
tttctgccag aacttagctc tgtacatcca cccactatt tcttcacata ccgaatcagg  
960  
attgaaatgt caaaagatgc acttcctgag aaggcctgtc agttggacag tcgctattgg  
1020  
agaataacaa atgctaaggg tgacgtggaa gaagttcaag gacctggagt agttggtgaa  
1080  
tttccaatca tcagcccagg tcgggtatat gaatacacia gctgtaccac attctctaca  
1140  
acatcaggat acatggaagg gtattatacc ttccattttc tttactttaa agacaagatc  
1200  
tttaatgttg ccattccccg attccatattg gcatgtccaa cattcagggg gtctatagcc  
1260  
cgattggaaa tgggtcctga tgaatatgaa gagatggaag aagaggagga ggaggaagag  
1320  
gaggaagacg aggatgatga ttcagcagat atggatgaat cagatgaaga tgatgaagag  
1380  
gagagacgga ggagagtctt tgatgttccc attcgcagac gccgctgctc acgccttttt  
1440  
tagcaagcct tctgctgatg gaagcactag gatgattcta ggctgttaaa tagatttctc  
1500  
aataatgtaa ataactaaat tgttctctgc atatagcagg aaaactagca tgaaatattg  
1560  
tttcaggccc tgggttctat gtgacactac attaggaatt ggaattgtttg gggttgcttt  
1620  
gtgtttttga ggtagaggaa gaaatgggaa tctttttttt ctcttcagg agtcagtgga  
1680  
agaatagttc tctagctaag gaacggacat acctttgttt taaaatattt tatacttaca  
1740  
aaaatctaga aatggagagg gaactgtttt gaataaggat ttaaaatacc tgcacaagga  
1800  
tagagagaaa ctatgtgact cattctgtga aaagacttct tgcagttgtg agttatttag  
1860  
aaatgatcaa aatttgtaat taggctaate catttagtga ttcctaatat tttgtactca  
1920  
cagagaacta attgactaaa caactgaac gctagtgggt tgtccttaga caatctgtct  
1980  
ttgaatttaa agtctttatc gctaagacct tgactttaaa tttttcatca ctacaacctt  
2040

gaattttaatt tcagggtcttc aacatgatga ccttggattt aatttaaagt cttcaacact  
 2100  
 atgcgcttta tcatattatt cacagatgca tttttgaaat gtagtatgta aaagtatgta  
 2160  
 acgtgctgtt tattaacaaa agattgttca caacatctca tgtagttaa atttgtaa  
 2220  
 actgcttctg ttttgtttct cttttatata cttgactgtc tttgtgataa gtgacatgaa  
 2280  
 ttttatgtta ggattaagta tgttttctg aaacttgat ttttttgta attatataat  
 2340  
 tgagagttaa gaatgaaatc cttcaagtgt taaaaactca cattttaaaa gcaaattttg  
 2400  
 gttccaaaaa aaaa  
 2414

<210> 5496

<211> 345

<212> PRT

<213> Homo sapiens

<400> 5496

Met	Leu	Trp	Lys	Arg	Arg	Leu	Gly	Cys	Lys	Phe	Pro	Gly	Arg	Leu	Ser
1			5						10					15	
Met	Phe	Ile	Pro	Asn	Ser	Gln	Trp	Thr	Glu	Val	Ser	Trp	Phe	Leu	Gly
			20					25					30		
Leu	Leu	Gly	Ser	Met	Ala	Leu	Ser	Asn	His	Tyr	Arg	Ser	Glu	Asp	Leu
		35					40					45			
Leu	Asp	Val	Asp	Thr	Ala	Ala	Gly	Gly	Phe	Gln	Gln	Arg	Gln	Gly	Leu
	50					55					60				
Lys	Tyr	Cys	Leu	Pro	Leu	Thr	Phe	Cys	Ile	His	Thr	Gly	Leu	Ser	Gln
65				70					75					80	
Tyr	Ile	Ala	Val	Glu	Ala	Ala	Glu	Gly	Arg	Asn	Lys	Asn	Glu	Val	Phe
			85					90					95		
Tyr	Gln	Cys	Pro	Asp	Gln	Met	Ala	Arg	Asn	Pro	Ala	Ala	Ile	Asp	Met
			100					105					110		
Phe	Ile	Ile	Gly	Ala	Thr	Phe	Thr	Asp	Trp	Phe	Thr	Ser	Tyr	Val	Lys
		115					120					125			
Asn	Val	Val	Ser	Gly	Gly	Phe	Pro	Ile	Ile	Arg	Asp	Gln	Ile	Phe	Arg
	130					135					140				
Tyr	Val	His	Asp	Pro	Glu	Cys	Val	Ala	Thr	Thr	Gly	Asp	Ile	Thr	Val
145				150					155					160	
Ser	Val	Ser	Thr	Ser	Phe	Leu	Pro	Glu	Leu	Ser	Ser	Val	His	Pro	Pro
			165					170					175		
His	Tyr	Phe	Phe	Thr	Tyr	Arg	Ile	Arg	Ile	Glu	Met	Ser	Lys	Asp	Ala
		180					185						190		
Leu	Pro	Glu	Lys	Ala	Cys	Gln	Leu	Asp	Ser	Arg	Tyr	Trp	Arg	Ile	Thr
	195						200					205			
Asn	Ala	Lys	Gly	Asp	Val	Glu	Glu	Val	Gln	Gly	Pro	Gly	Val	Val	Gly
	210					215					220				
Glu	Phe	Pro	Ile	Ile	Ser	Pro	Gly	Arg	Val	Tyr	Glu	Tyr	Thr	Ser	Cys
225					230					235				240	
Thr	Thr	Phe	Ser	Thr	Thr	Ser	Gly	Tyr	Met	Glu	Gly	Tyr	Tyr	Thr	Phe
			245					250					255		
His	Phe	Leu	Tyr	Phe	Lys	Asp	Lys	Ile	Phe	Asn	Val	Ala	Ile	Pro	Arg

260 265 270  
Phe His Met Ala Cys Pro Thr Phe Arg Val Ser Ile Ala Arg Leu Glu  
275 280 285  
Met Gly Pro Asp Glu Tyr Glu Glu Met Glu Glu Glu Glu Glu Glu Glu  
290 295 300  
Glu Glu Glu Asp Glu Asp Asp Asp Ser Ala Asp Met Asp Glu Ser Asp  
305 310 315 320  
Glu Asp Asp Glu Glu Glu Arg Arg Arg Arg Val Phe Asp Val Pro Ile  
325 330 335  
Arg Arg Arg Arg Cys Ser Arg Leu Phe  
340 345

&lt;210&gt; 5497

&lt;211&gt; 1056

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5497

cacgaggaag aatgtggaag gatctcccat tggccggttg gggcaaaagc ctgaggcaat  
60  
ctttcatccc cttttgccaa ggcgagactt tcccagtgac ggtgatgtag ttggccactc  
120  
tgactatggg tggactcggg tgtagacctc tgaagctgag atcacacgaa aacctggcct  
180  
ccccgccatg tagctgttgg agagtagaaa aatagagcac gcctgatgtt tctaaatgag  
240  
aagactttca atagtaatga agaatccatg gcactctcct caccctcaaa cacatggcag  
300  
tcattcacat acaggcccca aagtcactgt tagtgctgca gtggctcctg tggacattgg  
360  
aaagcccgga gagggcgtgg aagaaatcag ctggcccccg gcaggttctc tggggttttg  
420  
tgcccaaggc tcctggagcc ctaaaaactt tcaaaagtta actccccacg tccccatcct  
480  
gcttgggttt ctggactttt ctgaggcacc ggcagagggg tctcgttgct cccttgagtg  
540  
taggggcagc cctttaacct ggctccttga gtccctgctt tttctgcttc tgttgccctc  
600  
ttcctcgtct tcctctctct caatatctcc ctctctttgt cctccccag ttctgacct  
660  
ggccatcccc ggggtgccct gaccagcccc gtgtctcctc aggggtgtccc agcaccagcc  
720  
tggcacagag tggggctcag ttagagtatg tgggatgttg gtttcgccag gtgagtgaat  
780  
gaaaggactc gaccaccaca gctgagccac tagctgggac atgcgaagag ttctaggtgc  
840  
aaaggctgga ggggtggaatt catttttgag aggtgtgtga gcagcttccg acccctgccc  
900  
catttgaacg ggggccttgc tggtcgcgtc cctgcattca cccgcgcggc catccccgtca  
960  
tccaacagtt gatcctaact gagcacgccc acggccctgg tctggcctgg gcaccggcga  
1020  
ccgtagccca tcccttgatg gcctctgtgt ccccag  
1056

<210> 5498  
 <211> 150  
 <212> PRT  
 <213> Homo sapiens

<400> 5498  
 Met Gly Gln Gly Ser Glu Ala Ala His Thr Pro Leu Lys Asn Glu Phe  
 1 5 10 15  
 His Pro Pro Ala Phe Ala Pro Arg Thr Leu Arg Met Ala Gln Leu Val  
 20 25 30  
 Ala Gln Leu Trp Trp Ser Ser Pro Phe Ile His Ser Pro Gly Glu Thr  
 35 40 45  
 Asn Ile Pro His Thr Leu Thr Glu Pro His Ser Val Pro Gly Trp Cys  
 50 55 60  
 Trp Asp Thr Leu Arg Arg His Gly Ala Gly Gln Gly His Pro Gly Met  
 65 70 75 80  
 Ala Arg Ser Gly Thr Gly Glu Gly Gln Arg Glu Gly Asp Ile Glu Arg  
 85 90 95  
 Glu Glu Asp Glu Glu Glu Gly Asn Arg Ser Arg Lys Ser Arg Asp Ser  
 100 105 110  
 Arg Ser Gln Val Lys Gly Leu Pro Leu His Ser Arg Glu Gln Arg Asp  
 115 120 125  
 Pro Ser Ala Gly Ala Ser Glu Lys Ser Arg Asn Pro Ser Arg Met Gly  
 130 135 140  
 Thr Trp Gly Val Asn Phe  
 145 150

<210> 5499  
 <211> 1918  
 <212> DNA  
 <213> Homo sapiens

<400> 5499  
 ngctagccct gtatctgtct gagcagtgga atgtgccagg aaagaaggag caaccactga  
 60  
 ctgatgaacc ttgcccagtc tcccttccaa gagggatgcc agagccttct gtctttgggc  
 120  
 tgcctctgcc cttcgtagat tctctgctgg gcctttggaa ctaacacagc aacttccagg  
 180  
 gtctcatggt gaagacttta tggagcatcc tggccagaac aagccaagga gccaagacga  
 240  
 gagggacaca cggacaaaca acagacagaa gacgtactgg ccgctggact ccgctgcctc  
 300  
 ccccatctcc ccgccatctg cgcccggagg atgagcccag ccttcagggc catggatgtg  
 360  
 gagccccgcg ccaaaggcgt ccttctggag ccctttgtcc accaggtcgg ggggcactca  
 420  
 tgcgtgctcc gcttcaatga gacaaccctg tgcaagcccc tgggcccaag ggaacatcag  
 480  
 ttctacgaga cctccctgc tgagatgcgc aaattcactc cccagtacaa aggtgtggta  
 540  
 tctgtgcgct ttgaagaaga tgaagacagg aacttgtgtc taatagcata tccattgaaa  
 600

ggggaccatg gaattgtgga cattgcacat aattcagact gtgaaccaa aagtaagctc  
660  
ctaagggtgga caacaaacaa aaaacatcat gtcttagaaa cagaaaagac ccctaaggac  
720  
tgggtgctgc agcaccgtaa agaggagaaa atgaagagcc ataagttaga agaagaattt  
780  
gagtggctaa agaaatctga agtcttgtac tacactgtag agaagaaggg gaatataagt  
840  
tcccagctta aacactataa cccttgagc atgaaatgtc accagcaaca gttacagaga  
900  
atgaaggaga atgcaaagca tcggaaccag tacaatttta tcttactgga aaacctgact  
960  
tcccgctatg aggtgccttg tgtccttgac ctcaagatgg gcacacgaca acatgggtgat  
1020  
gatgcttcag aggagaaggc agccaaccag atccgaaaat gtcagcagag cacatctgca  
1080  
gtcattggtg tgncgtgtg tggcatgcag gtgtaccaag caggcagtgg gcagctcatg  
1140  
ttcatgaaca agtaccatgg acggaagcta tcggtgcagg gcttcaagga ggcacttttc  
1200  
cagttcttcc acaatgggcg gtacctgcgc cgtgaactcc tgggccctgt gctcaagaag  
1260  
ctgactgagc tcaaggcagt gttggagcga caggagtcct accgcttcta ctcaagctcc  
1320  
ctgctggtca tttatgatgg caaggagcgg ccggaagtgg tcctggactc agatgctgag  
1380  
gatttggagg acctgtcaga ggaatcagct gatgagtctg ctggtgccta tgcctacaaa  
1440  
cccacggcg ccagctctgt agatgtgcgc atgatcgact ttgcacacac cacctgcagg  
1500  
ctgtatggcg aggacaccgt ggtgcatgag ggccaggatg ctggctatat cttegggctc  
1560  
cagagcctga tagacattgt cacagagata agtgaggaga gtggggagtg agcttgctag  
1620  
ctgctccagt acttgagagc gactctgtgt cccaggcaca gctgtgctgc gtcaggagg  
1680  
aagccagtat ggccagggtg tggctcctgc agcctggagc tgatgtgcag tggcctctgt  
1740  
gagccccagc ctgagccagt cccagctgtg cttggagtct ttatttatatt taactatttc  
1800  
ttcaacattc cacatttgat gatgatacct ctttcttccc tgagtgtata tgttctaata  
1860  
caaattcttt tgtttattgt aaaaaaaaaa aaaaaaaaaa aaagaaaaac tcgaaaag  
1918

&lt;210&gt; 5500

&lt;211&gt; 426

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5500

Met	Ser	Pro	Ala	Phe	Arg	Ala	Met	Asp	Val	Glu	Pro	Arg	Ala	Lys	Gly
1				5				10						15	
Val	Leu	Leu	Glu	Pro	Phe	Val	His	Gln	Val	Gly	Gly	His	Ser	Cys	Val

20						25					30				
Leu	Arg	Phe	Asn	Glu	Thr	Thr	Leu	Cys	Lys	Pro	Leu	Val	Pro	Arg	Glu
35						40			45						
His	Gln	Phe	Tyr	Glu	Thr	Leu	Pro	Ala	Glu	Met	Arg	Lys	Phe	Thr	Pro
50						55			60						
Gln	Tyr	Lys	Gly	Val	Val	Ser	Val	Arg	Phe	Glu	Glu	Asp	Glu	Asp	Arg
65					70					75					80
Asn	Leu	Cys	Leu	Ile	Ala	Tyr	Pro	Leu	Lys	Gly	Asp	His	Gly	Ile	Val
			85						90			95			
Asp	Ile	Ala	His	Asn	Ser	Asp	Cys	Glu	Pro	Lys	Ser	Lys	Leu	Leu	Arg
			100						105			110			
Trp	Thr	Thr	Asn	Lys	Lys	His	His	Val	Leu	Glu	Thr	Glu	Lys	Thr	Pro
			115						120			125			
Lys	Asp	Trp	Val	Arg	Gln	His	Arg	Lys	Glu	Glu	Lys	Met	Lys	Ser	His
			130						135			140			
Lys	Leu	Glu	Glu	Glu	Phe	Glu	Trp	Leu	Lys	Lys	Ser	Glu	Val	Leu	Tyr
145					150					155					160
Tyr	Thr	Val	Glu	Lys	Lys	Gly	Asn	Ile	Ser	Ser	Gln	Leu	Lys	His	Tyr
			165						170			175			
Asn	Pro	Trp	Ser	Met	Lys	Cys	His	Gln	Gln	Gln	Leu	Gln	Arg	Met	Lys
			180						185			190			
Glu	Asn	Ala	Lys	His	Arg	Asn	Gln	Tyr	Lys	Phe	Ile	Leu	Leu	Glu	Asn
			195						200			205			
Leu	Thr	Ser	Arg	Tyr	Glu	Val	Pro	Cys	Val	Leu	Asp	Leu	Lys	Met	Gly
			210						215			220			
Thr	Arg	Gln	His	Gly	Asp	Asp	Ala	Ser	Glu	Glu	Lys	Ala	Ala	Asn	Gln
225					230					235					240
Ile	Arg	Lys	Cys	Gln	Gln	Ser	Thr	Ser	Ala	Val	Ile	Gly	Val	Xaa	Val
			245						250			255			
Cys	Gly	Met	Gln	Val	Tyr	Gln	Ala	Gly	Ser	Gly	Gln	Leu	Met	Phe	Met
			260						265			270			
Asn	Lys	Tyr	His	Gly	Arg	Lys	Leu	Ser	Val	Gln	Gly	Phe	Lys	Glu	Ala
			275						280			285			
Leu	Phe	Gln	Phe	Phe	His	Asn	Gly	Arg	Tyr	Leu	Arg	Arg	Glu	Leu	Leu
			290						295			300			
Gly	Pro	Val	Leu	Lys	Lys	Leu	Thr	Glu	Leu	Lys	Ala	Val	Leu	Glu	Arg
305					310					315					320
Gln	Glu	Ser	Tyr	Arg	Phe	Tyr	Ser	Ser	Ser	Leu	Leu	Val	Ile	Tyr	Asp
			325						330			335			
Gly	Lys	Glu	Arg	Pro	Glu	Val	Val	Leu	Asp	Ser	Asp	Ala	Glu	Asp	Leu
			340						345			350			
Glu	Asp	Leu	Ser	Glu	Glu	Ser	Ala	Asp	Glu	Ser	Ala	Gly	Ala	Tyr	Ala
			355						360			365			
Tyr	Lys	Pro	Ile	Gly	Ala	Ser	Ser	Val	Asp	Val	Arg	Met	Ile	Asp	Phe
			370						375			380			
Ala	His	Thr	Thr	Cys	Arg	Leu	Tyr	Gly	Glu	Asp	Thr	Val	Val	His	Glu
385					390					395					400
Gly	Gln	Asp	Ala	Gly	Tyr	Ile	Phe	Gly	Leu	Gln	Ser	Leu	Ile	Asp	Ile
			405												

<210> 5501

<211> 568



<212> DNA  
<213> Homo sapiens

<400> 5501  
attcggcacg aggtgagtcg gtggcaggaa cgtgggctct agactgtgca ttcaggctct  
60  
cctacttggc agaatgatct tggggaaacg acttcatctg aacttcagat atttcacatg  
120  
tgaagcgggg acaaaaccat gcagctcaga ggtccctgtg ggggctgggg gagctgccct  
180  
gcaggtcttg gcacatgcac agcaggctcc ccatagcttt gtcaccacaa agggcactgt  
240  
tctattcaca gcacctctg cttctgcctg gcaactgtgt ctccctgtgc tatatttaat  
300  
tccaccagca aagctggcga ggcagggccc agccctgaag gagatctcct tgcctgaccc  
360  
ctggacctgg aaatggaggc ttcattgtgc cgccttggcg gcttaagcct gctgctttgg  
420  
cagtgccatg ggtgagccga gcagctgtga ggtgggtggg gcagggctgt agcccacgcc  
480  
gggtgctatt ccaggctcta ggggctgggt ctcaccccca cccccagcga cttccgtcct  
540  
acctggcatg ctgcagccct ctgccggc  
568

<210> 5502  
<211> 110  
<212> PRT  
<213> Homo sapiens

<400> 5502  
Met Ile Leu Gly Lys Arg Leu His Leu Asn Phe Arg Tyr Phe Thr Cys  
1 5 10 15  
Glu Ala Gly Thr Lys Pro Cys Ser Ser Glu Val Pro Val Gly Ala Gly  
20 25 30  
Gly Ala Ala Leu Gln Val Leu Ala His Ala Gln Gln Ala Pro His Ser  
35 40 45  
Phe Val Thr Thr Lys Gly Thr Val Leu Phe Thr Ala Pro Pro Ala Ser  
50 55 60  
Ala Trp Gln Leu Cys Leu Pro Val Leu Tyr Leu Ile Pro Pro Ala Lys  
65 70 75 80  
Leu Ala Arg Gln Gly Pro Ala Leu Lys Glu Ile Ser Leu Pro Asp Pro  
85 90 95  
Trp Thr Trp Lys Trp Arg Leu His Val Pro Ala Leu Ala Ala  
100 105 110

<210> 5503  
<211> 1679  
<212> DNA  
<213> Homo sapiens

<400> 5503  
tgtctgggaa aaggggaactc acaaggggtg agtaccacca aattaggaga taccatgagc  
60

taacgccgctc tcagaattgc ataaatttgt ctacattttt caaagaagtt gggttatctg  
120  
atttaatcct cacaatagtc aagctaggaa ggtaagtgtg gaattattac cccatttgat  
180  
aggtagacaa attaaagctt aagatcaaac cgtttgcaaa gcaggaagca gcacttcctc  
240  
ttgggtccagt tcttcttctt ccctgggtgt aagggtcagtg gatgttggtt cccacaggc  
300  
cagaaagctg gagagaagcc cctgggtgca ggacccgggg aggaggaact gctccggggc  
360  
tcagcccctc atgtcagga cactcagagt gaggaactgc caccctcctg caccatctca  
420  
ggagagaaga agccgccagc agtctctgga gaagccaccg gggctgatgc tgggagactg  
480  
tgcccgcccc cccgtccag ggctccccac aaagaacagaa ctctagcccc ctccaggccc  
540  
cagactcagg gggaagattg ttccctccca gtgggagagg tgaagatagg aaagagggtc  
600  
tattctccag ccccgaggaa gcagaaaaag cctaagcca tgggtctggc cccaacatca  
660  
tctccgggtg cccctaactc agcccggtgc acacacaacc cagtgccttg tgggtcaggc  
720  
cgggggccct gccacctggc caatctctc agtacattgg cgcagagcaa ccaaacaga  
780  
gaccacaagc agggggcccc ggaagtgacc tgccaaatta ggaaaaagac acgaacccta  
840  
taccgtcag atcagctgga ggagctagag aagatattcc aagaagacca ctatcctgac  
900  
agtataaac gccgagagat tgcccagacg gtgggggtga cccccagcg catcatggta  
960  
aagggggccg gctcactggg ggcagggtgg agtggcggag ggcccacat tgaaacactc  
1020  
gaattgcaga gtgagcgctc agcggtagcc tgggtgtggt tccagaatcg ccgggccaag  
1080  
tggcgaaaaa tggagaaact gaatgggaaa gaaagcaagg acaatcctgc agcccctggc  
1140  
cctgccagca gtcaatgcag ctctgcagct gagatcctac ctgctgtgcc catggagcca  
1200  
aagcctgacc ctttccctca ggagtccct ctggatacct ttccagagcc cccatgctg  
1260  
ctgacttctg accagacttt ggccccacc caaccagtg aggggtgctca gaggggtggtg  
1320  
acccccccac tcttcagccc cccacctgtg cgaagggccg atcttctttt ccccttggc  
1380  
cctgtccaca ccccccaact gatgccactg ctgatggatg ttgctggcag tgacagcagc  
1440  
cacaaggacg gcccctgtgg gtctggggg acaaggtaag gaacctacgg gggtaggtca  
1500  
ctctagttat ctgggtgggg gtaggggggt gtagatggag agaagataga cacagagagg  
1560  
agagggttaa ctgagaggag cacagagtgg tacaggagat ggggatgaaa gggataaggg  
1620  
gatctgggga atgacctagg ggatcacagc aatagagcag aaacaagggt aagatgcta  
1679

<210> 5504  
 <211> 392  
 <212> PRT  
 <213> Homo sapiens

<400> 5504  
 Gln Lys Ala Gly Glu Lys Pro Leu Ala Ala Gly Pro Gly Glu Glu Glu  
 1 5 10 15  
 Leu Leu Arg Gly Ser Ala Pro His Ala Gln Asp Thr Gln Ser Glu Glu  
 20 25 30  
 Leu Pro Pro Ser Cys Thr Ile Ser Gly Glu Lys Lys Pro Pro Ala Val  
 35 40 45  
 Ser Gly Glu Ala Thr Gly Ala Asp Ala Gly Arg Leu Cys Pro Pro Pro  
 50 55 60  
 Arg Ser Arg Ala Pro His Lys Asp Arg Thr Leu Ala Arg Ser Arg Pro  
 65 70 75 80  
 Gln Thr Gln Gly Glu Asp Cys Ser Leu Pro Val Gly Glu Val Lys Ile  
 85 90 95  
 Gly Lys Arg Ser Tyr Ser Pro Ala Pro Gly Lys Gln Lys Lys Pro Asn  
 100 105 110  
 Ala Met Gly Leu Ala Pro Thr Ser Ser Pro Gly Ala Pro Asn Ser Ala  
 115 120 125  
 Arg Ala Thr His Asn Pro Val Pro Cys Gly Ser Gly Arg Gly Pro Cys  
 130 135 140  
 His Leu Ala Asn Leu Leu Ser Thr Leu Ala Gln Ser Asn Gln Asn Arg  
 145 150 155 160  
 Asp His Lys Gln Gly Pro Pro Glu Val Thr Cys Gln Ile Arg Lys Lys  
 165 170 175  
 Thr Arg Thr Leu Tyr Arg Ser Asp Gln Leu Glu Glu Leu Glu Lys Ile  
 180 185 190  
 Phe Gln Glu Asp His Tyr Pro Asp Ser Asp Lys Arg Arg Glu Ile Ala  
 195 200 205  
 Gln Thr Val Gly Val Thr Pro Gln Arg Ile Met Val Lys Gly Ala Gly  
 210 215 220  
 Ser Leu Val Ala Gly Trp Ser Gly Gly Gly Pro Thr Ile Glu Thr Leu  
 225 230 235 240  
 Glu Leu Gln Ser Glu Arg Ser Ala Val Ala Trp Val Trp Phe Gln Asn  
 245 250 255  
 Arg Arg Ala Lys Trp Arg Lys Met Glu Lys Leu Asn Gly Lys Glu Ser  
 260 265 270  
 Lys Asp Asn Pro Ala Ala Pro Gly Pro Ala Ser Ser Gln Cys Ser Ser  
 275 280 285  
 Ala Ala Glu Ile Leu Pro Ala Val Pro Met Glu Pro Lys Pro Asp Pro  
 290 295 300  
 Phe Pro Gln Glu Ser Pro Leu Asp Thr Phe Pro Glu Pro Pro Met Leu  
 305 310 315 320  
 Leu Thr Ser Asp Gln Thr Leu Ala Pro Thr Gln Pro Ser Glu Gly Ala  
 325 330 335  
 Gln Arg Val Val Thr Pro Pro Leu Phe Ser Pro Pro Pro Val Arg Arg  
 340 345 350  
 Ala Asp Leu Pro Phe Pro Leu Gly Pro Val His Thr Pro Gln Leu Met  
 355 360 365  
 Pro Leu Leu Met Asp Val Ala Gly Ser Asp Ser Ser His Lys Asp Gly

370 375 380  
Pro Cys Gly Ser Trp Gly Thr Arg  
385 390

<210> 5505  
<211> 1099  
<212> DNA  
<213> Homo sapiens

<400> 5505  
aagcttgggc ggcccagcgg atcgtgccgc ggcgccgag cgcagctaca ggaggggtgtc  
60  
cagaagccac aagccatggc tgtggggaac atcaacgagc tgcccagaaa catcctgctg  
120  
gagctgttca cgcacgtgcc cgcccgcag ctgctgctga actgccgcct ggtctgcagc  
180  
ctctggcggg acctcatcga cctcgtgacc ctctggaaac gcaagtgcct gcgagagggc  
240  
ttcatcactg aggactggga ccagcccgtg gccgactgga agatcttcta cttcttacgg  
300  
agcctgcaca ggaacctcct gcacaaccg tgcgctgaag aggggttcga gttctggagc  
360  
ctggatgtga atggaggcga tgagtggaag gtggaggatc tctctcgaga ccagaggaag  
420  
gaattcccca atgaccaggt caagaaatac ttcgttactt catattacac ctgcctcaag  
480  
tcccaggtgg tggacctcaa ggccgaaggg tattgggagg agctactaga cacattccgg  
540  
ccggacatcg tggttaagga ctggtttgct gccagagccg actgtggctg cacctaccaa  
600  
ctcaaagtgc agctcctgtc ggctgactac ttcgtgttgg cctccttcga gccagaccg  
660  
gcgaccatcc agcagaagag cgatgccaa gggagggagg tctccacac attctccaac  
720  
taccgccccg gcgtccgcta catctggttt cagcacggcg gcgtggacac tcattactgg  
780  
gccggctggt acggcccag ggtcaccaac agcagcatca ccatcgggccc cccgctgccc  
840  
tgacaccccc tgagcccca tctgctgaac cctgactggt aaacaactgc tgtcagaaaa  
900  
gggctgggct tgggaagggg aggtggaggc caggtgtccc cagacctcta acccttgccc  
960  
ctagcagcct cttctttgtg gagcctctca gtgtgggcag cctcgcgatg ctgggggtcgg  
1020  
gccagctctc ccgaaaggc cttgacctga atgatggccg gggaagcctg cgtgtgcccc  
1080  
tttcagagac ggagcacct  
1099

<210> 5506  
<211> 280  
<212> PRT  
<213> Homo sapiens

&lt;400&gt; 5506

Lys Leu Gly Arg Pro Ser Gly Ser Cys Arg Gly Gly Arg Ala Gln Leu  
 1 5 10 15  
 Gln Glu Gly Val Gln Lys Pro Gln Ala Met Ala Val Gly Asn Ile Asn  
 20 25 30  
 Glu Leu Pro Glu Asn Ile Leu Leu Glu Leu Phe Thr His Val Pro Ala  
 35 40 45  
 Arg Gln Leu Leu Leu Asn Cys Arg Leu Val Cys Ser Leu Trp Arg Asp  
 50 55 60  
 Leu Ile Asp Leu Val Thr Leu Trp Lys Arg Lys Cys Leu Arg Glu Gly  
 65 70 75 80  
 Phe Ile Thr Glu Asp Trp Asp Gln Pro Val Ala Asp Trp Lys Ile Phe  
 85 90 95  
 Tyr Phe Leu Arg Ser Leu His Arg Asn Leu Leu His Asn Pro Cys Ala  
 100 105 110  
 Glu Glu Gly Phe Glu Phe Trp Ser Leu Asp Val Asn Gly Gly Asp Glu  
 115 120 125  
 Trp Lys Val Glu Asp Leu Ser Arg Asp Gln Arg Lys Glu Phe Pro Asn  
 130 135 140  
 Asp Gln Val Lys Lys Tyr Phe Val Thr Ser Tyr Tyr Thr Cys Leu Lys  
 145 150 155 160  
 Ser Gln Val Val Asp Leu Lys Ala Glu Gly Tyr Trp Glu Glu Leu Leu  
 165 170 175  
 Asp Thr Phe Arg Pro Asp Ile Val Val Lys Asp Trp Phe Ala Ala Arg  
 180 185 190  
 Ala Asp Cys Gly Cys Thr Tyr Gln Leu Lys Val Gln Leu Leu Ser Ala  
 195 200 205  
 Asp Tyr Phe Val Leu Ala Ser Phe Glu Pro Asp Pro Ala Thr Ile Gln  
 210 215 220  
 Gln Lys Ser Asp Ala Lys Trp Arg Glu Val Ser His Thr Phe Ser Asn  
 225 230 235 240  
 Tyr Pro Pro Gly Val Arg Tyr Ile Trp Phe Gln His Gly Gly Val Asp  
 245 250 255  
 Thr His Tyr Trp Ala Gly Trp Tyr Gly Pro Arg Val Thr Asn Ser Ser  
 260 265 270  
 Ile Thr Ile Gly Pro Pro Leu Pro  
 275 280

&lt;210&gt; 5507

&lt;211&gt; 1658

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5507

nttttagaaa gccaaaggaat tgagttaaat ccaccagaga agatggctct tgatccttac  
 60  
 actgaactcc gaaaacagcc tcttcgtaag tatgtcaccc catcagactt tgatcaactc  
 120  
 aagcaatttc tcacctttga caaacagggtc cttcgattct atgcaatctg ggatgatata  
 180  
 gacagcatgt atggtgaatg tcggacctac atcattcatt actatcttat ggatgatagc  
 240  
 gtggaaattc gagaggtcca cgaacggaat gatgggagag atcctttccc actcctaata  
 300

aaccgccagc gtgtgccc aa agttttggtg gaaaatgcaa agaacttccc tcagtgtgtg  
360  
ctagaaatct ctgaccaaga agtggttgaa tggatactg ctaaagactt cattgttggg  
420  
aagtcactca ctatccttgg gagaactttc ttcatttatg attgtgatcc atttactga  
480  
cgggtattaca aagagaagtt tggaaactc gatttaccac gtattgatgt gagcaagcgg  
540  
gaaccacctc cagtaaaaca ggagttgcct ccttataacg gttttggact agtggaagat  
600  
tctgctcaga attgttttgc tctcattcca aaagctcaa aaaaagacgt tattaaaatg  
660  
ctggtgaatg ataacaaggt gcttcgttat ttggctgtac tggaaatcccc catcccagaa  
720  
gacaaagacc gcagatttgt cttctcttac tttctagcta ccgacatgat cagtatcttt  
780  
gagcctcctg ttcgcaattc tggatcatt gggggcaagt accttggcag gactaaagtt  
840  
gttaaaccat actctacagt ggacaaccct gtctactatg gcccagtgat cttcttcatt  
900  
gggtgctgtga ttgaagtgtt tggtcaccgg ttcacatcc ttgatacaga cgagtatgtt  
960  
ttgaaataca tggagagcaa cgctgcccag tattcaccag aagcactcgc gtcaattcag  
1020  
aaccatgtcc gaaagcgaga agcgctgct ccagaagcag aaagcaagca aactgaaaag  
1080  
gatccaggcg tgcaggaatt ggaagcatta atagacacaa ttcagaagca actgaaagat  
1140  
cactcatgca aagacaacat tcgtgaggca tttcaaattt atgacaagga agcttcagga  
1200  
tatgtggaca gagacatgtt ctttaaaatc tgtgaatcgc ttaacgtccc agtggatgac  
1260  
tccttgggta aggagttaat caggatgtgc tctcatggag aaggcaaaat taactactat  
1320  
aactttgttc gtgctttctc aaactgacct gctgatgaga aaatgcaaga caatttttga  
1380  
tactggaact atgctttgaa atacacctta cactcttcat agaggcattt acagggttcc  
1440  
tgaagtttta tttctgtttt gggtcttatt tcaactctac tgaagtcgaa actaaattgg  
1500  
atctaatagg atctaagatt ggtgccttat ttaggggtgat aggggtatag caatgtctaa  
1560  
ttttgtgtgt caaattgact tggccacagg gggcccaaat atttccttcc tttcttttta  
1620  
aaaaaataaa ttttttttga gatgggaaaa aaaaaaaaa  
1658

&lt;210&gt; 5508

&lt;211&gt; 448

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5508

Xaa Leu Glu Ser Gln Gly Ile Glu Leu Asn Pro Pro Glu Lys Met Ala

1	5	10	15
Leu Asp Pro Tyr Thr Glu Leu Arg Lys Gln Pro Leu Arg Lys Tyr Val			
20	25	30	
Thr Pro Ser Asp Phe Asp Gln Leu Lys Gln Phe Leu Thr Phe Asp Lys			
35	40	45	
Gln Val Leu Arg Phe Tyr Ala Ile Trp Asp Asp Thr Asp Ser Met Tyr			
50	55	60	
Gly Glu Cys Arg Thr Tyr Ile Ile His Tyr Tyr Leu Met Asp Asp Thr			
65	70	75	80
Val Glu Ile Arg Glu Val His Glu Arg Asn Asp Gly Arg Asp Pro Phe			
85	90	95	
Pro Leu Leu Met Asn Arg Gln Arg Val Pro Lys Val Leu Val Glu Asn			
100	105	110	
Ala Lys Asn Phe Pro Gln Cys Val Leu Glu Ile Ser Asp Gln Glu Val			
115	120	125	
Leu Glu Trp Tyr Thr Ala Lys Asp Phe Ile Val Gly Lys Ser Leu Thr			
130	135	140	
Ile Leu Gly Arg Thr Phe Phe Ile Tyr Asp Cys Asp Pro Phe Thr Arg			
145	150	155	160
Arg Tyr Tyr Lys Glu Lys Phe Gly Ile Thr Asp Leu Pro Arg Ile Asp			
165	170	175	
Val Ser Lys Arg Glu Pro Pro Pro Val Lys Gln Glu Leu Pro Pro Tyr			
180	185	190	
Asn Gly Phe Gly Leu Val Glu Asp Ser Ala Gln Asn Cys Phe Ala Leu			
195	200	205	
Ile Pro Lys Ala Pro Lys Lys Asp Val Ile Lys Met Leu Val Asn Asp			
210	215	220	
Asn Lys Val Leu Arg Tyr Leu Ala Val Leu Glu Ser Pro Ile Pro Glu			
225	230	235	240
Asp Lys Asp Arg Arg Phe Val Phe Ser Tyr Phe Leu Ala Thr Asp Met			
245	250	255	
Ile Ser Ile Phe Glu Pro Pro Val Arg Asn Ser Gly Ile Ile Gly Gly			
260	265	270	
Lys Tyr Leu Gly Arg Thr Lys Val Lys Pro Tyr Ser Thr Val Asp			
275	280	285	
Asn Pro Val Tyr Tyr Gly Pro Ser Asp Phe Phe Ile Gly Ala Val Ile			
290	295	300	
Glu Val Phe Gly His Arg Phe Ile Ile Leu Asp Thr Asp Glu Tyr Val			
305	310	315	320
Leu Lys Tyr Met Glu Ser Asn Ala Ala Gln Tyr Ser Pro Glu Ala Leu			
325	330	335	
Ala Ser Ile Gln Asn His Val Arg Lys Arg Glu Ala Pro Ala Pro Glu			
340	345	350	
Ala Glu Ser Lys Gln Thr Glu Lys Asp Pro Gly Val Gln Glu Leu Glu			
355	360	365	
Ala Leu Ile Asp Thr Ile Gln Lys Gln Leu Lys Asp His Ser Cys Lys			
370	375	380	
Asp Asn Ile Arg Glu Ala Phe Gln Ile Tyr Asp Lys Glu Ala Ser Gly			
385	390	395	400
Tyr Val Asp Arg Asp Met Phe Phe Lys Ile Cys Glu Ser Leu Asn Val			
405	410	415	
Pro Val Asp Asp Ser Leu Val Lys Glu Leu Ile Arg Met Cys Ser His			
420	425	430	
Gly Glu Gly Lys Ile Asn Tyr Tyr Asn Phe Val Arg Ala Phe Ser Asn			

435

440

445

<210> 5509  
<211> 818  
<212> DNA  
<213> Homo sapiens

<400> 5509  
ccactgtgtg aagagaaatt agggtgaccc aggcagtaca tcctactccc tggacccacc  
60  
aaggagagct gtatttgtgt ttcatgggtg ctttaccaaa taattctagc atcggaattg  
120  
ctatgtgaga ggaagtaagt atacacagcg taagagggtg gataaccaag tcatagaaga  
180  
aatgtttgga gaacatggaa tcatgtgaac ttattatgtg gtaagtacag ataccaggg  
240  
ctgtcagtct caccatcctt ttctacacat gtggatgctt caggactcca gcctttgagg  
300  
atgtggcttt caacttcacc ctacaggaaa ggtagtcaat gtggagaagc cttcagccag  
360  
attccaggtc ataacttgaa taagaaaacg cctcctggag taaagccacc tgaaagccat  
420  
gtgtgtggag aggtcggcgt gggctatcca tccactgaaa ggcacatcag agatcgcctt  
480  
ggacgcaaac cctgtgaata tcaggaatgt agacagaagg catatacatg taagccatgt  
540  
gggaatgcct ttcgttttca ccaactcctt cacatacacg aaaggcctca cagtggagaa  
600  
aacctctatg aatgttagga atttcagaaa acattcactt ccccccaaa cttcaaaga  
660  
tgtgaaaatg catagtggag atggacctta caaatgcaag gtgggtagga aaacctttga  
720  
ctctcccagt tcatttcgaa tacatggaag atctcattct ggagagaaaac ccaatgtgtg  
780  
taggcactgt gggagcacct acaatcattt cagttttg  
818

<210> 5510  
<211> 105  
<212> PRT  
<213> Homo sapiens

<400> 5510  
Met Trp Leu Ser Thr Ser Pro Tyr Arg Lys Gly Ser Gln Cys Gly Glu  
1 5 10 15  
Ala Phe Ser Gln Ile Pro Gly His Asn Leu Asn Lys Lys Thr Pro Pro  
20 25 30  
Gly Val Lys Pro Pro Glu Ser His Val Cys Gly Glu Val Gly Val Gly  
35 40 45  
Tyr Pro Ser Thr Glu Arg His Ile Arg Asp Arg Leu Gly Arg Lys Pro  
50 55 60  
Cys Glu Tyr Gln Glu Cys Arg Gln Lys Ala Tyr Thr Cys Lys Pro Cys  
65 70 75 80  
Gly Asn Ala Phe Arg Phe His His Ser Phe His Ile His Glu Arg Pro



85 . 90 95  
His Ser Gly Glu Asn Leu Tyr Glu Cys  
100 105

<210> 5511  
<211> 379  
<212> DNA  
<213> Homo sapiens

<400> 5511  
tccggagtgt cacaggcctc agccacaagg ctttcctgat tgggctccac atctgcagaa  
60  
ccttccttgg gaaaagaggg catcgtctca atcgcatagt cacacacatc ccttaactca  
120  
ctctgctgag ttgctgagag tctgtgttcc tctctccact tataggatgg gtcctcatct  
180  
tcttgagctt caagcccaa ggcagagacc tggctgctcc tcatgggagc ctcagggata  
240  
atgctgaatt cctctatggc agagatggga ggagaggctc cacgctgggc ctctcagcc  
300  
tccatcaggg ctgaatcctg gtcggtgtca catgctgctt cggccccagc gtccctcca  
360  
ggccccggcg ccggccgcn  
379

<210> 5512  
<211> 101  
<212> PRT  
<213> Homo sapiens

<400> 5512  
Met Glu Ala Glu Ala Gln Arg Gly Ala Ser Pro Pro Ile Ser Ala  
1 5 10 15  
Ile Glu Glu Phe Ser Ile Ile Pro Glu Ala Pro Met Arg Ser Ser Gln  
20 25 30  
Val Ser Ala Leu Gly Leu Glu Ala Gln Glu Asp Glu Asp Pro Ser Tyr  
35 40 45  
Lys Trp Arg Glu Glu His Arg Leu Ser Ala Thr Gln Gln Ser Glu Leu  
50 55 60  
Arg Asp Val Cys Asp Tyr Ala Ile Glu Thr Met Pro Ser Phe Pro Lys  
65 70 75 80  
Glu Gly Ser Ala Asp Val Glu Pro Asn Gln Glu Ser Leu Val Ala Glu  
85 90 95  
Ala Cys Asp Thr Pro  
100

<210> 5513  
<211> 837  
<212> DNA  
<213> Homo sapiens

<400> 5513  
nnaagcttga gttcctctgt ccaaggccag ggacctgtga ccatggaagc agagagaagc  
60

aaggccacag ccgcggccct gggcagtttc ccggcagggtg gcccggccga gctgtcgctg  
120  
agactcgggg agccattgac catcgtctct gaggatggag actggtggac ggtgctgtct  
180  
gaagtctcag gcagagagta taacatcccc agcgtccacg tggccaaagt ctcccatggg  
240  
tggctgtatg agggcctgag cagggagaaa gcagaggacc tgctgttgtt acctgggaac  
300  
cctggagggg ccttctcat ccgggagagc cagaccagga gaggtcttta ctctctgtca  
360  
gtccgcctca gccgcctgc atcctgggac cggatcagac actacaggat ccactgcctt  
420  
gacaatggct ggctgtacat ctcaccgcgc ctcaccttcc cctcactcca ggccctgggtg  
480  
gaccattact ctgagctggc ggatgacatc tgctgcctac tcaaggagcc ctgtgtcctg  
540  
cagagggctg gcccgtccc tggcaaggat ataccctac ctgtgactgt gcagaggaca  
600  
ccactcaact ggaaagagct ggacagctcc ctcctgtttt ctgaagctgc cacaggggag  
660  
gagtctcttc tcagtggagg tctccgggag tccctcagct tctacatcag cctgaatgac  
720  
gaggctgtct ctttgatga tgcctaggcc caaaggagag gccaaaaggg aaaccaaggc  
780  
tgcacaccta gaacccaat tcagcctcct gggcaccca gaggaaggc tgtgcac  
837

&lt;210&gt; 5514

&lt;211&gt; 248

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5514

Xaa	Ser	Leu	Ser	Ser	Ser	Val	Gln	Gly	Gln	Gly	Pro	Val	Thr	Met	Glu
1			5					10						15	
Ala	Glu	Arg	Ser	Lys	Ala	Thr	Ala	Ala	Ala	Leu	Gly	Ser	Phe	Pro	Ala
			20					25					30		
Gly	Gly	Pro	Ala	Glu	Leu	Ser	Leu	Arg	Leu	Gly	Glu	Pro	Leu	Thr	Ile
			35					40					45		
Val	Ser	Glu	Asp	Gly	Asp	Trp	Trp	Thr	Val	Leu	Ser	Glu	Val	Ser	Gly
			50				55					60			
Arg	Glu	Tyr	Asn	Ile	Pro	Ser	Val	His	Val	Ala	Lys	Val	Ser	His	Gly
65					70					75					80
Trp	Leu	Tyr	Glu	Gly	Leu	Ser	Arg	Glu	Lys	Ala	Glu	Asp	Leu	Leu	Leu
				85					90					95	
Leu	Pro	Gly	Asn	Pro	Gly	Gly	Ala	Phe	Leu	Ile	Arg	Glu	Ser	Gln	Thr
			100					105						110	
Arg	Arg	Gly	Ser	Tyr	Ser	Leu	Ser	Val	Arg	Leu	Ser	Arg	Pro	Ala	Ser
			115					120					125		
Trp	Asp	Arg	Ile	Arg	His	Tyr	Arg	Ile	His	Cys	Leu	Asp	Asn	Gly	Trp
			130				135				140				
Leu	Tyr	Ile	Ser	Pro	Arg	Leu	Thr	Phe	Pro	Ser	Leu	Gln	Ala	Leu	Val
145					150					155					160
Asp	His	Tyr	Ser	Glu	Leu	Ala	Asp	Asp	Ile	Cys	Cys	Leu	Leu	Lys	Glu

165								170					175		
Pro	Cys	Val	Leu	Gln	Arg	Ala	Gly	Pro	Leu	Pro	Gly	Lys	Asp	Ile	Pro
180								185					190		
Leu	Pro	Val	Thr	Val	Gln	Arg	Thr	Pro	Leu	Asn	Trp	Lys	Glu	Leu	Asp
195								200					205		
Ser	Ser	Leu	Leu	Phe	Ser	Glu	Ala	Ala	Thr	Gly	Glu	Glu	Ser	Leu	Leu
210								215					220		
Ser	Glu	Gly	Leu	Arg	Glu	Ser	Leu	Ser	Phe	Tyr	Ile	Ser	Leu	Asn	Asp
225								230					235		
240								245							
Glu	Ala	Val	Ser	Leu	Asp	Asp	Ala								

```
<210> 5515
<211> 420
<212> DNA
<213> Homo sapiens
```

```

<400> 5515
gtttgtacca  accccctctc  catccttgaa  gcagtcatgg  cccactgcaa  gaaaatgcaa
60
gaaaggatgt  ccgcacagct  ggctgctgct  gagagcagac  aaaagaagct  ggaaatggag
120
aagcttcage  tacaagccct  tgagcaagag  cacaagaagc  tggctgcccc  ccttgaggaa
180
gagcgtggca  agaacaagca  ggtggtcctg  atgctgggtc  aagagtgcaa  gcagctctca
240
agcaaagtca  tagaggaggc  ccagaagctc  gaagacgtaa  tggccaaact  ggcttcttct
300
ctttgtcacc  agcacctgct  tcatagtctc  tctggagtgc  caggaacggg  tcatatagat
360
taaatctccc  ataccgttcc  tggataaata  cctccttctc  gcgagcccg  agggcctcga
420

```

```
<210> 5516
<211> 120
<212> PRT
<213> Homo sapiens
```

```

<400> 5516
Val Cys Thr Asn Pro Leu Ser Ile Leu Glu Ala Val Met Ala His Cys
  1                      5                      10                      15
Lys Lys Met Gln Glu Arg Met Ser Ala Gln Leu Ala Ala Ala Glu Ser
  20                      25                      30
Arg Gln Lys Lys Leu Glu Met Glu Lys Leu Gln Leu Gln Ala Leu Glu
  35                      40                      45
Gln Glu His Lys Lys Leu Ala Ala Arg Leu Glu Glu Glu Arg Gly Lys
  50                      55                      60
Asn Lys Gln Val Val Leu Met Leu Val Lys Glu Cys Lys Gln Leu Ser
  65                      70                      75                      80
Ser Lys Val Ile Glu Glu Ala Gln Lys Leu Glu Asp Val Met Ala Lys
  85                      90                      95
Leu Ala Ser Ser Leu Cys His Gln His Leu Leu His Ser Leu Ser Gly
  100                      105                      110
Val Pro Gly Thr Gly His Ile Asp

```

115

120

<210> 5517  
 <211> 804  
 <212> DNA  
 <213> Homo sapiens

<400> 5517  
 nctgtatggc caaagcacaagggaaggat ccgcaattta cattcttgga gctatcatct  
 60  
 gtactgtact gttgtgatct actgattggc attggcatag tagtagggtc aagtgcacaga  
 120  
 atccgtgccca gcagctctcca ggttcagaag caattcaaga ccctgatgat agctctccag  
 180  
 caaccaacac atgggtgacat ggtgattgtg ccaacttggt gctcagttat atgcagggcc  
 240  
 agtgattggg ttaagtgaag accatgggtg agatcatttg tctttgggtct aatagaattt  
 300  
 gagctagtag aatttgagtc tccagggaaa gagctacttg accaaattaa actagtagca  
 360  
 ggtagagcat gaatgacagc atattatacc atcaagatgt tcttagagca gtgtatggat  
 420  
 ggatcgattg tactgccatc agttgtgact gacgttggtat tcaaggagaa agagaaactt  
 480  
 gtttagaaaag cactttgaaa gttttttgag tacgggggtg ccctgtatca ccccgttatg  
 540  
 gttgaacttt ctctttcaaa attaccagac ttggcagcag tggcaaatta ttgggctaaa  
 600  
 agacttaatc agacatatc tgggttcaag gctcctaata taatacctgg tgcaaacatt  
 660  
 atacttccac tcattcagat ggttgcaccc tgccaggcat ccagtgggac tgggaatatg  
 720  
 gacacttgaa cattaacat cctgaagaat tttggaatga caggttacaa gtgaacataa  
 780  
 tcagttctct atattaaaaa aaaa  
 804

<210> 5518  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 5518  
 Xaa Val Trp Pro Lys His Lys Gly Lys Asp Pro Gln Phe Thr Phe Leu  
 1 5 10 15  
 Glu Leu Ser Ser Val Leu Tyr Cys Cys Asp Leu Leu Ile Gly Ile Gly  
 20 25 30  
 Ile Val Val Gly Ser Ser Asp Arg Ile Arg Ala Ser Ser Leu Gln Val  
 35 40 45  
 Gln Lys Gln Phe Lys Thr Leu Met Ile Ala Leu Gln Gln Pro Thr His  
 50 55 60  
 Gly Asp Met Val Ile Val Pro Thr Cys Cys Ser Val Ile Cys Arg Ala  
 65 70 75 80  
 Ser Asp Trp Phe Lys

85

<210> 5519  
<211> 401  
<212> DNA  
<213> Homo sapiens

<400> 5519  
ctccataaca tccattttcc tattatgagc agaggaaata aacatgcaga tggcttggtt  
60  
tccttcgcat aacttggtaca ggggtaggta gcataaaaga cagccggtct caagaagcaa  
120  
ccatgcgcct cactacttac catgttcctg cgggcattcc cctcccgaag ggagtctctg  
180  
aaaacaaaca cacacagaag ttggcgctgg gcaccacatt ctctcttga cctaaccatc  
240  
aggaatttgc tgtgccatct gttcataaaa cttagccagg cccagaaagc ttgtcccaac  
300  
cacatgctaa gagccaagca gatggaacag aagctcccc aagctgctgg ctcccactat  
360  
ggctgggatg aagcaagaac ctgggcccac acaggctgca a  
401

<210> 5520  
<211> 101  
<212> PRT  
<213> Homo sapiens

<400> 5520  
Met Trp Leu Gly Gln Ala Phe Trp Ala Trp Leu Ser Phe Met Asn Arg  
1 5 10 15  
Trp His Ser Lys Phe Leu Met Val Arg Ser Arg Gly Glu Cys Gly Ala  
20 25 30  
Gln Arg Gln Leu Leu Cys Val Phe Val Phe Arg Asp Ser Leu Arg Glu  
35 40 45  
Gly Asn Ala Arg Arg Asn Met Val Ser Ser Glu Ala His Gly Cys Phe  
50 55 60  
Leu Arg Pro Ala Val Phe Tyr Ala Thr Tyr Pro Cys Thr Ser Tyr Ala  
65 70 75 80  
Lys Glu Thr Lys Pro Ser Ala Cys Leu Phe Pro Leu Leu Ile Ile Gly  
85 90 95  
Lys Trp Met Leu Trp  
100

<210> 5521  
<211> 2524  
<212> DNA  
<213> Homo sapiens

<400> 5521  
ngggggagct cgcccgctgt ccgccagccc gcgggagggga ggagagaagc gaagcgtttc  
60  
cgcggttggt tactcagtgt cttggtctca agttgectca ttgcggctgg cgttcccaat  
120

acagacgcat cgtttctttt ttaatactcc ctaagaaagg gaataacctt caagctggcg  
180  
ggagcaatgg ttcacataaa gaaaggcgag ctgacccagg aggagaagga gctactggaa  
240  
gtcatcggga aagggtactgt ccaagaagct ggaacattat tatccagcaa gaatgttcgt  
300  
gtcaactggt tggacgagaa tggaaatgact cctctaatac atgcagcata taaaggaaaa  
360  
ctcgatatgt gcaaattact actgcgacat ggagccgatg taaattgtca tcagcatgaa  
420  
catggataca cagccctcat gtttgctgca ctttctggta ataaagacat cacatgggta  
480  
atgttagagg ctggtgctga gacagatggt gtcaactctg tgggaagaac agcagctcag  
540  
atggcagcct ttgtgggtca acatgattgt gtgaccataa tcaacaattt ctttcctcga  
600  
gagagactgg attattacac taagccccag ggactggata aagagccaaa actgccccca  
660  
aagttggcag gcccgtgca caaaattatc accacaacga atcttcatcc tgtcaagatc  
720  
gtgatgcttg taaatgagaa tcctctgctg acagaagaag cagccctgaa taaatgctac  
780  
agagtgatgg atttgatttg tgagaaatgt atgaagcaaa gagacatgaa tgaagtattg  
840  
gctatgaaga tgcattacat aagctgtatc tttcagaaat gcattaactt cttaaaagat  
900  
ggagagaata aactggacac cttgatcaaa agcttgctaa aaggccgagc ttctgatggc  
960  
tttccagtgt atcaagaaaa gatcattaga gaaagtatca gaaaatttcc atactgtgaa  
1020  
gccacactcc tacagcagct ggtgcgaagc atcgctccag ttgaaattgg ttctgatccc  
1080  
actgcattct ccgctcctac ccaagccatc actggccagg tgggttttgt ggatgtggaa  
1140  
ttttgcaacta cctgtggaga aaaggagca agtaaaagat gttcagtttg caaaatggta  
1200  
atatattgtg atcaaacctg ccagaaaaca cactggttta ctcataagaa aatctgtaag  
1260  
aatctgaagg acatttacga aaagcaacag ttggaggctg ccaaagaaaa gagacaagag  
1320  
gaaaaccacg gcaaacttga tgtcaattct aactgtgtta atgaagagca accagaggct  
1380  
gaagtaggta tctctcaaag ggattccaat cctgaagatt ccggggaagg aaagaaagaa  
1440  
tctcttgaaa gcgaagctga gttggaaggc ttacaggatg ctctgcagg gccacagggtg  
1500  
tctgaggagt aaaagccaga gcaagtgccg gtgtggatgg tcctcacctt gcaagaagct  
1560  
ggaaaactcc taggaatgca ttgtcctcac cttgttatac ctgcgtggca ccatggcagg  
1620  
attccacatt tcatagaata cagggttttca agcaaacccc tgttgaccat gccctaattt  
1680  
cctattgatt tctgttctat gattgaatgg atattcctat ggaaaatttt ttgtttcaaa  
1740

atacaggaaa aacataccta ttacctttct gaggetggct ttccagcaat tgtttcaaag  
1800  
gaaaatagat ccccttaaag aaaaaataca ggcttttaggg aacaaagga caagcagaac  
1860  
agggtgggaa gagagatttt caggaagga aaaatttata gctacagagg gtagttagaa  
1920  
aatcataac ttatatgtga ataaaataca tataagcagc atttacggta gtggcattct  
1980  
acttattaag atgcaatgaa atgaagaaag gctttatgtt caaggacctt tgccatagtt  
2040  
cagctaattg tagttttata tagaaatgat cctgaacact ctgaacttga cgtagtcttg  
2100  
cggatgatt ctatctgcag tatttgtacc tccagaatgg cagatccctc agcaggaaca  
2160  
aaggcatatt gacggttctc tcagcgtatg cattaaaaa ggtacttctt gaaacttttg  
2220  
attcaataat gactaaacat actatgtaca caattactgt aaggctaatt cacgtgccat  
2280  
acgccacctg aaagcctgag ttatcttgct ataagctttt catggagcac ttcctttcca  
2340  
gaaactgatt tgtaactcat ttagagaatg tcctggcgtc ggttttttagc atatgtggta  
2400  
tttaaacaga gctagaatgt gatgtctgaa gataatgctg catttctggg tttcttgtgt  
2460  
ggattttaaa ataaattgtg cctacaaata taaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
2520  
aaaa  
2524

&lt;210&gt; 5522

&lt;211&gt; 441

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5522

Met	Val	His	Ile	Lys	Lys	Gly	Glu	Leu	Thr	Gln	Glu	Glu	Lys	Glu	Leu
1				5				10					15		
Leu	Glu	Val	Ile	Gly	Lys	Gly	Thr	Val	Gln	Glu	Ala	Gly	Thr	Leu	Leu
			20					25					30		
Ser	Ser	Lys	Asn	Val	Arg	Val	Asn	Cys	Leu	Asp	Glu	Asn	Gly	Met	Thr
		35					40					45			
Pro	Leu	Met	His	Ala	Ala	Tyr	Lys	Gly	Lys	Leu	Asp	Met	Cys	Lys	Leu
	50					55					60				
Leu	Leu	Arg	His	Gly	Ala	Asp	Val	Asn	Cys	His	Gln	His	Glu	His	Gly
65				70				75					80		
Tyr	Thr	Ala	Leu	Met	Phe	Ala	Ala	Leu	Ser	Gly	Asn	Lys	Asp	Ile	Thr
			85					90					95		
Trp	Val	Met	Leu	Glu	Ala	Gly	Ala	Glu	Thr	Asp	Val	Val	Asn	Ser	Val
		100						105					110		
Gly	Arg	Thr	Ala	Ala	Gln	Met	Ala	Ala	Phe	Val	Gly	Gln	His	Asp	Cys
	115					120					125				
Val	Thr	Ile	Ile	Asn	Asn	Phe	Phe	Pro	Arg	Glu	Arg	Leu	Asp	Tyr	Tyr
	130					135					140				
Thr	Lys	Pro	Gln	Gly	Leu	Asp	Lys	Glu	Pro	Lys	Leu	Pro	Pro	Lys	Leu

145                      150                      155                      160  
 Ala Gly Pro Leu His Lys Ile Ile Thr Thr Thr Asn Leu His Pro Val  
                                  165                      170                      175  
 Lys Ile Val Met Leu Val Asn Glu Asn Pro Leu Leu Thr Glu Glu Ala  
                                  180                      185                      190  
 Ala Leu Asn Lys Cys Tyr Arg Val Met Asp Leu Ile Cys Glu Lys Cys  
                                  195                      200                      205  
 Met Lys Gln Arg Asp Met Asn Glu Val Leu Ala Met Lys Met His Tyr  
                                  210                      215                      220  
 Ile Ser Cys Ile Phe Gln Lys Cys Ile Asn Phe Leu Lys Asp Gly Glu  
 225                                   230                      235                      240  
 Asn Lys Leu Asp Thr Leu Ile Lys Ser Leu Leu Lys Gly Arg Ala Ser  
                                  245                      250                      255  
 Asp Gly Phe Pro Val Tyr Gln Glu Lys Ile Ile Arg Glu Ser Ile Arg  
                                  260                      265                      270  
 Lys Phe Pro Tyr Cys Glu Ala Thr Leu Leu Gln Gln Leu Val Arg Ser  
                                  275                      280                      285  
 Ile Ala Pro Val Glu Ile Gly Ser Asp Pro Thr Ala Phe Ser Val Leu  
                                  290                      295                      300  
 Thr Gln Ala Ile Thr Gly Gln Val Gly Phe Val Asp Val Glu Phe Cys  
 305                                   310                      315                      320  
 Thr Thr Cys Gly Glu Lys Gly Ala Ser Lys Arg Cys Ser Val Cys Lys  
                                  325                      330                      335  
 Met Val Ile Tyr Cys Asp Gln Thr Cys Gln Lys Thr His Trp Phe Thr  
                                  340                      345                      350  
 His Lys Lys Lys Ile Cys Lys Asn Leu Lys Asp Ile Tyr Glu Lys Gln Gln  
                                  355                      360                      365  
 Leu Glu Ala Ala Lys Glu Lys Arg Gln Glu Glu Asn His Gly Lys Leu  
                                  370                      375                      380  
 Asp Val Asn Ser Asn Cys Val Asn Glu Glu Gln Pro Glu Ala Glu Val  
 385                                   390                      395                      400  
 Gly Ile Ser Gln Arg Asp Ser Asn Pro Glu Asp Ser Gly Glu Gly Lys  
                                  405                      410                      415  
 Lys Glu Ser Leu Glu Ser Glu Ala Glu Leu Glu Gly Leu Gln Asp Ala  
                                  420                      425                      430  
 Pro Ala Gly Pro Gln Val Ser Glu Glu  
                                  435                      440

<210> 5523  
 <211> 6190  
 <212> DNA  
 <213> Homo sapiens

<400> 5523  
 naaaacctcc tgggaaataa ccgtgacccc ctggctcgtg ggggccgcct gttctcacta  
 60  
 acgccatggc ggggaccgga gtgagaaacc ggtgtctgtc actgactgca aagtgagcga  
 120  
 gaagcaggct gcgggcccgtc ccagcacgac gtggagcccc gcggagacct cgagatgccc  
 180  
 cgcggggaag ctcttgcccc cgggagacgg ggggctaagg acgaggccct gggcgaagaa  
 240  
 tcgggggagc ggtggagccc cgagttccat ctgcagagga aattggcgga cagcagccac  
 300



agtgaacagc aagatcgaaa cagagtttct gaagaactta tcatggttgt ccaagaaatg  
360  
aaaaaatact tcccctcgga gagacgcaat aaaccaagca ctctagatgc cctcaactat  
420  
gctctccgct gtgtccacag cgttcaagca aacagtgagt ttttccagat tctcagtcag  
480  
aatggagcac ctcaggcaga tgtgagcatg tacagtcttg aggagctggc cactatcgct  
540  
tcagaacaca cttccaaaaa cacagatacc tttgtggcag tatttttcatt tctgtctgga  
600  
aggttagtgc acatttctga acaggctgct ttgatcctga atcgtaagaa agatgtcctg  
660  
gcgtcttctc actttgttga cctgcttgca cctcaagaca tgaggggtatt ctacgcgcac  
720  
actgccagag ctcagcttcc tttctggaac aactggaccc aaagagctgc acggtatgaa  
780  
tgtgtccgg tgaaaccttt tttctgcagg atccgtggag gtgaagacag aaagcaagag  
840  
aagtgtcact cccattccg gatcatcccc tatctgattc atgtacatca ccctgccag  
900  
ccagaattgg aatcggaacc ttgctgtctc actgtggttg aaaagattca ctctggttat  
960  
gaagctcctc ggatcccagt gaataaaaaga atcttcacca ccacacacac cccaggggtg  
1020  
gtttttcttg aagtagatga aaaagcagtg cctttgctgg gttacctacc tcaggacctg  
1080  
attggaacat cgatcctaag ctacctgcac cctgaagatc gttctctgat ggttgccata  
1140  
caccaaaaag ggcatacctc ctttgaacat tctccattc gattttgtac tcaaaacgga  
1200  
gactacatca tactggattc cagttggtcc agctttgtga atccctggag ccggaagatt  
1260  
tctttcatca ttggtcggca taaagtctga acgagcccac taaatgagga tgtttttgct  
1320  
accaaaatta aaaagatgaa cgataatgac aaagacataa cagaattaca agaacaaatt  
1380  
tacaaacttc tcttacagcc agttcacgtg agcgtgtcca gcggctacgg gagcctgggg  
1440  
agcagcgggt cgcaggagca gcttgtcagc atcgctcct ccagtgaggc cagtgggcac  
1500  
cgtgtggagg agacgaaggc ggagcagatg accttgagc aggtctatgc cagtgtgaac  
1560  
aaaattaaaa atctgggtca gcagctctac attgagtcaa tgaccaaadc atcattcaag  
1620  
ccagtgcagg ggacacgcac agaaccgaat ggtgggtgtg aatgtaagac ctttacttcc  
1680  
ttccacaaa cactgaaaaa caatagtgtg tacactgagc cctgtgagga tttgaggaac  
1740  
gatgagcaca gccatccta tcaacagatc aactgtatcg acagtgtcat cagatacctg  
1800  
aagagctaca acattccagc tttgaaaaga aagtgtatct cctgtacaaa tacaacttct  
1860  
tcctcctcag aagaagacaa acagaaccac aaggcagatg atgtccaagc cttacaaggt  
1920

aacaagaatg cccctcagaa aatgccaaaca aatggacggg ccatagacac aggaggagga  
1980  
gctccacaga tcctgtccac ggcgatgctg agcttggggg cgggcataag ccaatgcggg  
2040  
tacagcagca ccattgtcca tgtcccaccc ccagagacag ccagggatgc taccctcttc  
2100  
tgtgagccct ggaccctgaa catgcagcca gcccctttga cctcggaaga atttaaacac  
2160  
gtggggctca cagcggctgt tctgtcagcg cacaccaga aggaagagca gaattatgtt  
2220  
gataaattcc gagaaaagat cctgtcatca ccctacagct cctatcttca gcaagaaagc  
2280  
aggagcaaag ctaaattatc atattttcaa ggagattcta cttccaagca gacgcggctg  
2340  
gccggctgca ggaaagggaa gcacaagcgg aagaagctgc cggagccgcc agacagcagc  
2400  
agctcgaaca ccggctctgg tccccgcagg ggagcgcac agaacgcaca gccctgctgc  
2460  
ccctccgcgg cctcctctcc gcacacctcg agcccgacct tcccacctgc cgccatggg  
2520  
cccagccagg ccccttacct cgtcccagct tttcccctcc cagccgcgac ctcacccgga  
2580  
agagaatacg cagcccccg aactgcaccg gaaggcctgc atgggccgcc cttgtccgag  
2640  
ggcttgacgc cttaccagc tttccctttt ccttacttgg atacttttat gaccgttttc  
2700  
ctgcctgacc cccctgtctg tcctctgttg tcgccatcgt ttttgccatg tccattcctg  
2760  
ggggcgacag cctcttctgc gatatcacc tcaatgtcgt cagcaatgag tccaactctg  
2820  
gacccacccc cttcagtcac cagccaaagg agagaggagg aaaagtggga ggcacaaagc  
2880  
gaggggcacc cgttcattac ttcgagaagc agctcacct tgcagttaa cttacttcag  
2940  
gaagagatgc ccagaccctc tgaatctcca gatcagatga gaaggaacac gtgcccacaa  
3000  
actgagtatc agtgtgttac aggcaacaat ggcagtgaga gcagtcctgc tactaccggg  
3060  
gcactgtcca cgggggcacc tcccaggag aatccatccc atcctactgc cagcgctctg  
3120  
tccacaggat cgcctcccat gaagaatcca tcccactcta ctgccagcgc tctgtccaca  
3180  
ggatcgctc ccatgaagaa tccatcccat cctactgcca gcacactgtc catgggattg  
3240  
cctcccagca ggactccatc ccctcctact gccactgttc tgtccacggg gtcacctccc  
3300  
agcgaatccc catccagaac tggttcagca gcacagga gacagcagc cagtatatac  
3360  
cttactagta gtgtttattc ttctaaaatc tccccaaatg ggcagcaatc tcaggacgta  
3420  
cagaaaaaag aaacatttcc taatgtcgcc gaagagccca tctggagaat gatacggcag  
3480  
acacctgagc gcattctcat gacataccag gtacctgaga ggggttaaaga agttgtacta  
3540

aaagaagacc tggaaaagct agaaagtatg aggcagcagc agccccagtt ttctcatggg  
3600  
caaaaggagg agctggctaa ggtgtataat tggattcaaa gccagactgt cactcaagaa  
3660  
atcgacattc aagcctgtgt cacttgtgaa aatgaagatt cagctgatgg tgcggccaca  
3720  
tcctgtggtc aggttctggt agaagacagc tgttgagtga ctgtgaggat gaaccttcat  
3780  
accttttcca agacgtgtta cacagacaga cttttttaag tcctggactt ttaaataacc  
3840  
atgaagtatt cattgaatgt taagattttt tcttcttgat tttttaatac acgtaattct  
3900  
tttgaagcag acattgtata cagaatctta cttctctttg tcctgatata attaaaatgg  
3960  
ccagttaggc tctttttgta gttgaattgt cttctaaaga gattggatgg cctctaaaga  
4020  
ggtatgtgta tctttatttc agatgtcacc cagagtaaata tataattaga agtatagcta  
4080  
gaatgagccc caaaccttag cctcatttat tttgttctgt tacataagtc attttccct  
4140  
tagagtgtt gaagaaatgc cacctacagg ttgtgtactt ttcataatgg tttccatgaa  
4200  
tgtagtacgt tcatacaggc ttcattcaac ctggcgttcc cctccataat taagatgaaa  
4260  
cattccggtt ttctcacaac acattagcac atactgtcca ttagcatatc tgggataacc  
4320  
aggttttggg ggttgagttt tggccttcat ccttgtatag ccttttcta ttgatttccc  
4380  
accttccagt gaaattctga aagtcttata ttaaaaatcg atccgcttac catgggccta  
4440  
ttcttgaag tttcagttag catttgcatt tgtaataata aaatgaaaga gcttcttacc  
4500  
cagtgtgtt gcccttttga gtatttttgt ttttaaaata atgattgtaa aatgttttac  
4560  
aagtaatgta aaagctagta tcattcttac atacttctgt gtttaaattt tcattcttac  
4620  
caaaacagtt aactctttct tccaatcaa ttatacaaa agaggctcgt ccagccctac  
4680  
cacaggctct actggcactg ccttttgttt gcccttgaac agggcagtg tgtggggact  
4740  
gcaaaagaga aaacgtccag ggcagccag ttgtcctcgc ccacagggtc ctgcaggctc  
4800  
catcagtcac cgctttctat ggcgtttgta gttgtgtctt ttaagaagtg agtgtgattg  
4860  
tttacttgat aaatcagctc actctctggt gctttttaga gaagtccttg attccttctt  
4920  
aaacttgga tgatagatga aattcacacc cctgcagatc agaaaaaaca aatagaagaa  
4980  
aatgagggtt acagtaacct gttgtcttta tataacttgc aacaaactaa tttatttttt  
5040  
tttctttttt ttgtttttgg ttttttatgg ttttttaagg aaaatacttt tctcctttga  
5100  
agttttacag ctttttgtaa atgcgtcctg ataataatta ggaaaatcga ctttttcac  
5160

catgatgacc atcctcatag ctcagatctc ctttcaaagt agtggcttcc tggatggtaa  
5220  
ttccatctta aggtgtcaga actattttca aatgctgcct ttgacagtcc ttggaatttt  
5280  
ctgatattaa gcagttccat gcaaattatc gtgttttata aatagctctc atagtctgct  
5340  
ccatcttgat agttaagtga tttctgaagc gtttgtgtgt gtgttgatca ggttgtgtga  
5400  
tatttttctg tgataaagaa tcaaatttga aacaattaac cagccagtag attgtctgtc  
5460  
agtaccttc tgtagtaata aagtttttgc cactgtaaat aaaaacagta tccgtagcta  
5520  
tcaggatcat tgcgcactca tatatgctaa gccttctgtt ctctaataga agcctttctt  
5580  
ttccattggt tctggatatt tgtattatcc aaatgtgctt atttctttgc cttagcacac  
5640  
gttttatgga gtacttgta tactagggtt gatttgaaac tgggtgcttg cgcagaactg  
5700  
tcagagcatg aggagcgtc ctctgtggg tggacgcatt cacgcactcc caggttgac  
5760  
ctgctgctgg cggtgagcag ggggttcagc agcttgaccg atgccccccg agggggctct  
5820  
ccccagctta aactttgttg tttaaatttg ttaacttttt atattaatga ctattgaaag  
5880  
tggtaataaa aatttatatt ataggcttca atgttttcat gaatgttacc caaaaagctg  
5940  
tgttttcttt ggtcagaggt caaaatttat gaaaaacaaa atgctgtatg aatggaaatc  
6000  
attttgcaat tgagtgcac ttcattgtaa ttcacagtgt aaatttaatc caaactgaaa  
6060  
ttttgtttca actgaatttg taattaactc tgaatttggt tttaatcatt agtaatattt  
6120  
cagttgggta tctttttaag taaaaacaac aaataaactc tgtacatgta aaacgtgaaa  
6180  
aaaaaaaaa  
6190

&lt;210&gt; 5524

&lt;211&gt; 1193

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5524

Met	Pro	Arg	Gly	Glu	Ala	Pro	Gly	Pro	Gly	Arg	Arg	Gly	Ala	Lys	Asp
1				5				10					15		
Glu	Ala	Leu	Gly	Glu	Glu	Ser	Gly	Glu	Arg	Trp	Ser	Pro	Glu	Phe	His
			20					25					30		
Leu	Gln	Arg	Lys	Leu	Ala	Asp	Ser	Ser	His	Ser	Glu	Gln	Gln	Asp	Arg
			35					40					45		
Asn	Arg	Val	Ser	Glu	Glu	Leu	Ile	Met	Val	Val	Gln	Glu	Met	Lys	Lys
			50				55				60				
Tyr	Phe	Pro	Ser	Glu	Arg	Arg	Asn	Lys	Pro	Ser	Thr	Leu	Asp	Ala	Leu
65					70				75					80	
Asn	Tyr	Ala	Leu	Arg	Cys	Val	His	Ser	Val	Gln	Ala	Asn	Ser	Glu	Phe

				85					90					95			
Phe	Gln	Ile	Leu	Ser	Gln	Asn	Gly	Ala	Pro	Gln	Ala	Asp	Val	Ser	Met		
			100					105					110				
Tyr	Ser	Leu	Glu	Glu	Leu	Ala	Thr	Ile	Ala	Ser	Glu	His	Thr	Ser	Lys		
		115					120					125					
Asn	Thr	Asp	Thr	Phe	Val	Ala	Val	Phe	Ser	Phe	Leu	Ser	Gly	Arg	Leu		
	130					135					140						
Val	His	Ile	Ser	Glu	Gln	Ala	Ala	Leu	Ile	Leu	Asn	Arg	Lys	Lys	Asp		
145					150					155					160		
Val	Leu	Ala	Ser	Ser	His	Phe	Val	Asp	Leu	Leu	Ala	Pro	Gln	Asp	Met		
			165					170					175				
Arg	Val	Phe	Tyr	Ala	His	Thr	Ala	Arg	Ala	Gln	Leu	Pro	Phe	Trp	Asn		
		180						185					190				
Asn	Trp	Thr	Gln	Arg	Ala	Ala	Arg	Tyr	Glu	Cys	Ala	Pro	Val	Lys	Pro		
	195						200					205					
Phe	Phe	Cys	Arg	Ile	Arg	Gly	Gly	Glu	Asp	Arg	Lys	Gln	Glu	Lys	Cys		
	210					215					220						
His	Ser	Pro	Phe	Arg	Ile	Ile	Pro	Tyr	Leu	Ile	His	Val	His	His	Pro		
225					230					235					240		
Ala	Gln	Pro	Glu	Leu	Glu	Ser	Glu	Pro	Cys	Cys	Leu	Thr	Val	Val	Glu		
			245					250					255				
Lys	Ile	His	Ser	Gly	Tyr	Glu	Ala	Pro	Arg	Ile	Pro	Val	Asn	Lys	Arg		
		260						265					270				
Ile	Phe	Thr	Thr	Thr	His	Thr	Pro	Gly	Cys	Val	Phe	Leu	Glu	Val	Asp		
	275						280					285					
Glu	Lys	Ala	Val	Pro	Leu	Leu	Gly	Tyr	Leu	Pro	Gln	Asp	Leu	Ile	Gly		
	290					295					300						
Thr	Ser	Ile	Leu	Ser	Tyr	Leu	His	Pro	Glu	Asp	Arg	Ser	Leu	Met	Val		
305					310					315					320		
Ala	Ile	His	Gln	Lys	Gly	His	Pro	Pro	Phe	Glu	His	Ser	Pro	Ile	Arg		
			325						330					335			
Phe	Cys	Thr	Gln	Asn	Gly	Asp	Tyr	Ile	Ile	Leu	Asp	Ser	Ser	Trp	Ser		
		340						345					350				
Ser	Phe	Val	Asn	Pro	Trp	Ser	Arg	Lys	Ile	Ser	Phe	Ile	Ile	Gly	Arg		
	355						360					365					
His	Lys	Val	Arg	Thr	Ser	Pro	Leu	Asn	Glu	Asp	Val	Phe	Ala	Thr	Lys		
	370					375					380						
Ile	Lys	Lys	Met	Asn	Asp	Asn	Asp	Lys	Asp	Ile	Thr	Glu	Leu	Gln	Glu		
385				390						395					400		
Gln	Ile	Tyr	Lys	Leu	Leu	Leu	Gln	Pro	Val	His	Val	Ser	Val	Ser	Ser		
			405						410					415			
Gly	Tyr	Gly	Ser	Leu	Gly	Ser	Ser	Gly	Ser	Gln	Glu	Gln	Leu	Val	Ser		
		420						425					430				
Ile	Ala	Ser	Ser	Ser	Glu	Ala	Ser	Gly	His	Arg	Val	Glu	Glu	Thr	Lys		
	435						440					445					
Ala	Glu	Gln	Met	Thr	Leu	Gln	Gln	Val	Tyr	Ala	Ser	Val	Asn	Lys	Ile		
	450					455						460					
Lys	Asn	Leu	Gly	Gln	Gln	Leu	Tyr	Ile	Glu	Ser	Met	Thr	Lys	Ser	Ser		
465					470					475					480		
Phe	Lys	Pro	Val	Thr	Gly	Thr	Arg	Thr	Glu	Pro	Asn	Gly	Gly	Gly	Glu		
			485						490					495			
Cys	Lys	Thr	Phe	Thr	Ser	Phe	His	Gln	Thr	Leu	Lys	Asn	Asn	Ser	Val		
		500						505					510				

```

Tyr Thr Glu Pro Cys Glu Asp Leu Arg Asn Asp Glu His Ser Pro Ser
515          520          525
Tyr Gln Gln Ile Asn Cys Ile Asp Ser Val Ile Arg Tyr Leu Lys Ser
530          535          540
Tyr Asn Ile Pro Ala Leu Lys Arg Lys Cys Ile Ser Cys Thr Asn Thr
545          550          555          560
Thr Ser Ser Ser Ser Glu Glu Asp Lys Gln Asn His Lys Ala Asp Asp
565          570          575
Val Gln Ala Leu Gln Gly Asn Lys Asn Ala Pro Gln Lys Met Pro Thr
580          585          590
Asn Gly Arg Ser Ile Asp Thr Gly Gly Gly Ala Pro Gln Ile Leu Ser
595          600          605
Thr Ala Met Leu Ser Leu Gly Ser Gly Ile Ser Gln Cys Gly Tyr Ser
610          615          620
Ser Thr Ile Val His Val Pro Pro Pro Glu Thr Ala Arg Asp Ala Thr
625          630          635          640
Leu Phe Cys Glu Pro Trp Thr Leu Asn Met Gln Pro Ala Pro Leu Thr
645          650          655
Ser Glu Glu Phe Lys His Val Gly Leu Thr Ala Ala Val Leu Ser Ala
660          665          670
His Thr Gln Lys Glu Glu Gln Asn Tyr Val Asp Lys Phe Arg Glu Lys
675          680          685
Ile Leu Ser Ser Pro Tyr Ser Ser Tyr Leu Gln Gln Glu Ser Arg Ser
690          695          700
Lys Ala Lys Tyr Ser Tyr Phe Gln Gly Asp Ser Thr Ser Lys Gln Thr
705          710          715          720
Arg Ser Ala Gly Cys Arg Lys Gly Lys His Lys Arg Lys Lys Leu Pro
725          730          735
Glu Pro Pro Asp Ser Ser Ser Ser Asn Thr Gly Ser Gly Pro Arg Arg
740          745          750
Gly Ala His Gln Asn Ala Gln Pro Cys Cys Pro Ser Ala Ala Ser Ser
755          760          765
Pro His Thr Ser Ser Pro Thr Phe Pro Pro Ala Ala Met Val Pro Ser
770          775          780
Gln Ala Pro Tyr Leu Val Pro Ala Phe Pro Leu Pro Ala Ala Thr Ser
785          790          795          800
Pro Gly Arg Glu Tyr Ala Ala Pro Gly Thr Ala Pro Glu Gly Leu His
805          810          815
Gly Pro Pro Leu Ser Glu Gly Leu Gln Pro Tyr Pro Ala Phe Pro Phe
820          825          830
Pro Tyr Leu Asp Thr Phe Met Thr Val Phe Leu Pro Asp Pro Pro Val
835          840          845
Cys Pro Leu Leu Ser Pro Ser Phe Leu Pro Cys Pro Phe Leu Gly Ala
850          855          860
Thr Ala Ser Ser Ala Ile Ser Pro Ser Met Ser Ser Ala Met Ser Pro
865          870          875          880
Thr Leu Asp Pro Pro Pro Ser Val Thr Ser Gln Arg Arg Glu Glu Glu
885          890          895
Lys Trp Glu Ala Gln Ser Glu Gly His Pro Phe Ile Thr Ser Arg Ser
900          905          910
Ser Ser Pro Leu Gln Leu Asn Leu Leu Gln Glu Glu Met Pro Arg Pro
915          920          925
Ser Glu Ser Pro Asp Gln Met Arg Arg Asn Thr Cys Pro Gln Thr Glu
930          935          940

```

Tyr Gln Cys Val Thr Gly Asn Asn Gly Ser Glu Ser Ser Pro Ala Thr  
 945 950 955 960  
 Thr Gly Ala Leu Ser Thr Gly Ser Pro Pro Arg Glu Asn Pro Ser His  
 965 970 975  
 Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys Asn Pro  
 980 985 990  
 Ser His Pro Thr Ala Ser Ala Leu Ser Thr Gly Ser Pro Pro Met Lys  
 995 1000 1005  
 Asn Pro Ser His Pro Thr Ala Ser Thr Leu Ser Met Gly Leu Pro Pro  
 1010 1015 1020  
 Ser Arg Thr Pro Ser His Pro Thr Ala Thr Val Leu Ser Thr Gly Ser  
 1025 1030 1035 1040  
 Pro Pro Ser Glu Ser Pro Ser Arg Thr Gly Ser Ala Ala Ser Gly Ser  
 1045 1050 1055  
 Ser Asp Ser Ser Ile Tyr Leu Thr Ser Ser Val Tyr Ser Ser Lys Ile  
 1060 1065 1070  
 Ser Gln Asn Gly Gln Gln Ser Gln Asp Val Gln Lys Lys Glu Thr Phe  
 1075 1080 1085  
 Pro Asn Val Ala Glu Glu Pro Ile Trp Arg Met Ile Arg Gln Thr Pro  
 1090 1095 1100  
 Glu Arg Ile Leu Met Thr Tyr Gln Val Pro Glu Arg Val Lys Glu Val  
 1105 1110 1115 1120  
 Val Leu Lys Glu Asp Leu Glu Lys Leu Glu Ser Met Arg Gln Gln Gln  
 1125 1130 1135  
 Pro Gln Phe Ser His Gly Gln Lys Glu Glu Leu Ala Lys Val Tyr Asn  
 1140 1145 1150  
 Trp Ile Gln Ser Gln Thr Val Thr Gln Glu Ile Asp Ile Gln Ala Cys  
 1155 1160 1165  
 Val Thr Cys Glu Asn Glu Asp Ser Ala Asp Gly Ala Ala Thr Ser Cys  
 1170 1175 1180  
 Gly Gln Val Leu Val Glu Asp Ser Cys  
 1185 1190

<210> 5525  
 <211> 761  
 <212> DNA  
 <213> Homo sapiens

<400> 5525  
 nggatccaag gtgagttgtc tggcaagaga agagtaggac tctgcatacc atgcccagag  
 60  
 ctgagatgga ctttatctgc ctacctgcct ctgcttgctc agtgggaaca tgaggagaga  
 120  
 gtgggcatca gtggttctgg ggcagggtct ctcttctgag atggggatta aggaagaggg  
 180  
 tgagcagggg tggatgttta gggggatgcc taaattcccc agtaaggaga ccgcagataa  
 240  
 actcaactct gtccatctta gcagggtat gtgacctttg aggatgtggc tgtctacttc  
 300  
 tcccaggagg aatggagatt gcttgatgac gctcagaggc tcctctaccg caatgtgatg  
 360  
 ctggagaact ttacacttct ggcctctctg ggacttgcgt cttccaagac ccatgaaata  
 420

acccagctgg agtcatggga ggagcccttc atgcctgctt gggaagttgt gacttcagcc  
 480  
 ataccgagag aaactctgag gatggccttt atgagggagc tggcaattga acatcattca  
 540  
 tctaaatatg cacactggag gcaagatgag aattcctgac agattgtcct tcctgagaag  
 600  
 acagccctct gccttggagc tccagagaga gggagccctg tattcttggc tgtaccgctc  
 660  
 gaatggagtt ttgatctcgc tgagtttggg gttgggggag gaaaggagtg gtcttgggtc  
 720  
 aaatgtgact cacttttgcg gttcttctga atgttagatc t  
 761

<210> 5526

<211> 102

<212> PRT

<213> Homo sapiens

<400> 5526

Val	Thr	Phe	Glu	Asp	Val	Ala	Val	Tyr	Phe	Ser	Gln	Glu	Glu	Trp	Arg
1			5					10				15			
Leu	Leu	Asp	Asp	Ala	Gln	Arg	Leu	Leu	Tyr	Arg	Asn	Val	Met	Leu	Glu
		20					25				30				
Asn	Phe	Thr	Leu	Leu	Ala	Ser	Leu	Gly	Leu	Ala	Ser	Ser	Lys	Thr	His
	35					40				45					
Glu	Ile	Thr	Gln	Leu	Glu	Ser	Trp	Glu	Glu	Pro	Phe	Met	Pro	Ala	Trp
	50				55					60					
Glu	Val	Val	Thr	Ser	Ala	Ile	Pro	Arg	Glu	Thr	Leu	Arg	Met	Ala	Phe
65				70				75						80	
Met	Arg	Glu	Leu	Ala	Ile	Glu	His	His	Ser	Ser	Lys	Tyr	Ala	His	Trp
			85					90						95	
Arg	Gln	Asp	Glu	Asn	Ser										
			100												

<210> 5527

<211> 728

<212> DNA

<213> Homo sapiens

<400> 5527

nnagatctga cactaaaggg catgagaacc actggatatc tgtatattcc ggctttggca  
 60  
 gcgttgcaact ctcccagttc tctactctcc cctcaggtca ccggattgaa actgtctcag  
 120  
 gaccttgatg atcttgccat tctctacctg gccacagttc aagccattgc tttggggact  
 180  
 cgcttcatta tagaagccat ggaggcagca gggcactcaa tcagtactct tttcctatgt  
 240  
 ggaggcctca gcaagaatcc cctttttgtg caaatgcatg cggacattac tggcatgcct  
 300  
 gtggctcctgt cgcaagaggt ggagtccgtt cttgtgggtg ctgctgttct gggcgcctgt  
 360  
 gcctcagggg atttcgcttc tgtacaggaa gcaatggcaa aaatgagcaa agttgggaaa  
 420



gttggtgtcc cgagactaca ggataaaaaa tactatgata agaaatacca agtattcctg  
480  
aagctgggtg aacaccagaa ggagtatttg gcgatcatga atgatgactg aacagggctt  
540  
gcaggtgctg atgccagaag cttatgtgcc attgcattaa agacttctgt catttgatcc  
600  
atgttcaaga cccttgaggt attgtttcat catttctgta ttgtctttca ataaagaaaa  
660  
caaacatgtg caaccagaaa aaaaaaaaaa aaaaataaaa aaaaaaaaaa aaaaaaaaaa  
720  
aaaaaaaa  
728

&lt;210&gt; 5528

&lt;211&gt; 176

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5528

Xaa	Asp	Leu	Thr	Leu	Lys	Gly	Met	Arg	Thr	Thr	Gly	Tyr	Leu	Tyr	Ile
1				5					10					15	
Pro	Ala	Leu	Ala	Ala	Leu	His	Ser	Pro	Ser	Ser	Leu	Leu	Ser	Pro	Gln
			20					25					30		
Val	Thr	Gly	Leu	Lys	Leu	Ser	Gln	Asp	Leu	Asp	Asp	Leu	Ala	Ile	Leu
		35					40					45			
Tyr	Leu	Ala	Thr	Val	Gln	Ala	Ile	Ala	Leu	Gly	Thr	Arg	Phe	Ile	Ile
	50					55					60				
Glu	Ala	Met	Glu	Ala	Ala	Gly	His	Ser	Ile	Ser	Thr	Leu	Phe	Leu	Cys
65					70					75				80	
Gly	Gly	Leu	Ser	Lys	Asn	Pro	Leu	Phe	Val	Gln	Met	His	Ala	Asp	Ile
				85				90					95		
Thr	Gly	Met	Pro	Val	Val	Leu	Ser	Gln	Glu	Val	Glu	Ser	Val	Leu	Val
			100					105					110		
Gly	Ala	Ala	Val	Leu	Gly	Ala	Cys	Ala	Ser	Gly	Asp	Phe	Ala	Ser	Val
		115					120				125				
Gln	Glu	Ala	Met	Ala	Lys	Met	Ser	Lys	Val	Gly	Lys	Val	Val	Phe	Pro
	130					135					140				
Arg	Leu	Gln	Asp	Lys	Lys	Tyr	Tyr	Asp	Lys	Lys	Tyr	Gln	Val	Phe	Leu
145					150					155				160	
Lys	Leu	Val	Glu	His	Gln	Lys	Glu	Tyr	Leu	Ala	Ile	Met	Asn	Asp	Asp
				165					170					175	

&lt;210&gt; 5529

&lt;211&gt; 2602

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5529

nntgccacc ttttgtgggg ggggaaagga cacaagggtt tttttttttt ttttttttta  
60  
gcaatggcgg ttcccggcgt ggggctcttg acccgtttga acctgtgtgc ccggagaaga  
120  
actcgagtcc agcggcctat cgtcaggctt ttgagttgcc caggaactgt ggccaaagac  
180

cttaggagag acgagcagcc ttcagggagc gtggagacag gttttgaaga caagattccc  
240  
aaaaggagat tctctgagat gcaaaatgaa agacgagaac aggcacagcg gactgtttta  
300  
atacattgcc cagagaaaat cagtgaaaac aagtttctta aatatttata ccaatttgga  
360  
cctattaata atcatttctt ctatgaaagc tttggctctt atgctgtcgt agaattttgc  
420  
caaaaggaaa gcatagggtc actgcagaat gggactcata ctccaagcac ggccatggag  
480  
actgcaattc cattcagatc acgtttcttc aatctgaagt tgaaaaacca gacttctgaa  
540  
cggtcacgcg tacggcgaag taatcagttg ccacgttcaa acaagcagct ttttgaatta  
600  
ctttgttatg cagaaagtat agacgatcag ctgaacactc tcttgaagga gttccagcta  
660  
acagaggaga aactaagct ccgatatctc acctgttctc ttattgaaga catggccgcc  
720  
gcgtattttc cagactgcat agtcagaccc tttggctcct cagtcaacac ttttgggaag  
780  
ttaggatgtg atttggacat gtttttggat ctagatgaaa ccagaaacct cagcgctcac  
840  
aagatctcag gaaattttct gatggaattt caagtgaaaa atgttccttc agaaagaatt  
900  
gcaactcaga agatcctgtc tgtgttagga gagtgccttg accacttttg ccctggctgt  
960  
gtgggtgtgc aaaaaatatt aaatgcccgg tgtccgctcg tgaggttctc acaccaggcc  
1020  
tccggatttc agtgtgattt gactacgaac aataggattg ccttgacaag ttccgaactc  
1080  
ctttatatat atgggtgccct agactcaaga gtgagagcct tgggtgttcag tgtacggtgc  
1140  
tgggctcgag cacattcact aacaagtagt attcctgggtg catggattac aaatttctcc  
1200  
cttacaatga tgggtcatctt ttttctccag agaagatcac cccctattct tccaacacta  
1260  
gattccttaa aaaccctagc agatgcagaa gataaatgtg taatagaagg caacaactgc  
1320  
acatttggtc gtgacttgag tagaattaaa ccttcacaga acacagaaac attagaatta  
1380  
ctactgaagg aattttttga gtattttggc aattttgctt tcgataaaaa ttccataaat  
1440  
attcgacagg gaagggagca aaacaaacct gattcttctc ctctgtacat tcagaatcca  
1500  
tttgaaactt ctctcaacat aagcaaaaat gtaagtcaaa gccagctgca aaaatttgta  
1560  
gatttggtccc gagaaagtgc ctggatttta caacaggaag atacagatcg acctccata  
1620  
tcaagtaatc ggccctgggg gctgggtatc ctattgtac catctgtccc aaacagaaag  
1680  
tcctttacca agaagaaaag caataagttt gcaattgaaa cagtcaaaaa cttgctagaa  
1740  
tctttaaaag gtaacagAAC agaaaatttc acaaaaacca gtgggaagag aacaattagt  
1800

actcagacat gatggctgct acattgtgta aagaactggg cttagcctat caaatggctt  
 1860  
 gtggacttac ttggaaaaac tgatttgaaa ctttcacaga tctcagcttt catctgatgt  
 1920  
 cacttttcat gatcttctca ttggccccct taacctgggc tgaagttctg ggatgttttc  
 1980  
 agtttgatca gtctgatact cagtggcact ttattaaaac atcagctgtg gagtgtggcg  
 2040  
 gtgcacacct gtagtcccag ctgctcagga ggctgaggca ggaggatctc ttgagcccag  
 2100  
 gattttgaat ccatcgtgga caacatagca agattccatc tctaaaaaaa atgaaaataa  
 2160  
 acataagcca caaggaatgg gtgaaagatt attgtaatgt gctttaacta aataggtaaa  
 2220  
 tatactaaac aaatgctaaa actcagtttt aggatgaaac cattgttgat atccacatca  
 2280  
 gtccctgttt agaaaacatt taaaatgact tttagttatg tacagtacgt tggcaatgaa  
 2340  
 tacattaagc ttcaaaaattt ggtagtgctc tcgaatatgt atatttgtat ttttcaagcg  
 2400  
 aagttctctt attcacatat aaattaaagt gggttggtac tgatatcaaa aaatgtttat  
 2460  
 gtttttagaa cagacatttc agtcactgca ttcttaggta ttccaaacca aatatgatga  
 2520  
 catcaataga ttgcatttta aaaatattgt ttgatttttc tattttcaaa aataaaattc  
 2580  
 tgtttctaac taaaaaaaaa aa  
 2602

&lt;210&gt; 5530

&lt;211&gt; 603

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5530

Xaa	Ala	His	Leu	Leu	Trp	Gly	Gly	Lys	Gly	His	Lys	Val	Phe	Phe	Phe
1			5				10						15		
Phe	Phe	Phe	Leu	Ala	Met	Ala	Val	Pro	Gly	Val	Gly	Leu	Leu	Thr	Arg
			20				25					30			
Leu	Asn	Leu	Cys	Ala	Arg	Arg	Arg	Thr	Arg	Val	Gln	Arg	Pro	Ile	Val
			35				40				45				
Arg	Leu	Leu	Ser	Cys	Pro	Gly	Thr	Val	Ala	Lys	Asp	Leu	Arg	Arg	Asp
			50			55					60				
Glu	Gln	Pro	Ser	Gly	Ser	Val	Glu	Thr	Gly	Phe	Glu	Asp	Lys	Ile	Pro
65				70					75					80	
Lys	Arg	Arg	Phe	Ser	Glu	Met	Gln	Asn	Glu	Arg	Arg	Glu	Gln	Ala	Gln
			85				90						95		
Arg	Thr	Val	Leu	Ile	His	Cys	Pro	Glu	Lys	Ile	Ser	Glu	Asn	Lys	Phe
			100				105					110			
Leu	Lys	Tyr	Leu	Ser	Gln	Phe	Gly	Pro	Ile	Asn	Asn	His	Phe	Phe	Tyr
		115				120					125				
Glu	Ser	Phe	Gly	Leu	Tyr	Ala	Val	Val	Glu	Phe	Cys	Gln	Lys	Glu	Ser
	130				135						140				
Ile	Gly	Ser	Leu	Gln	Asn	Gly	Thr	His	Thr	Pro	Ser	Thr	Ala	Met	Glu

145		150		155		160									
Thr	Ala	Ile	Pro	Phe	Arg	Ser	Arg	Phe	Phe	Asn	Leu	Lys	Leu	Lys	Asn
				165					170					175	
Gln	Thr	Ser	Glu	Arg	Ser	Arg	Val	Arg	Ser	Ser	Asn	Gln	Leu	Pro	Arg
			180					185					190		
Ser	Asn	Lys	Gln	Leu	Phe	Glu	Leu	Leu	Cys	Tyr	Ala	Glu	Ser	Ile	Asp
		195					200				205				
Asp	Gln	Leu	Asn	Thr	Leu	Leu	Lys	Glu	Phe	Gln	Leu	Thr	Glu	Glu	Asn
	210				215					220					
Thr	Lys	Leu	Arg	Tyr	Leu	Thr	Cys	Ser	Leu	Ile	Glu	Asp	Met	Ala	Ala
225				230						235				240	
Ala	Tyr	Phe	Pro	Asp	Cys	Ile	Val	Arg	Pro	Phe	Gly	Ser	Ser	Val	Asn
			245					250						255	
Thr	Phe	Gly	Lys	Leu	Gly	Cys	Asp	Leu	Asp	Met	Phe	Leu	Asp	Leu	Asp
		260					265					270			
Glu	Thr	Arg	Asn	Leu	Ser	Ala	His	Lys	Ile	Ser	Gly	Asn	Phe	Leu	Met
	275					280				285					
Glu	Phe	Gln	Val	Lys	Asn	Val	Pro	Ser	Glu	Arg	Ile	Ala	Thr	Gln	Lys
	290				295					300					
Ile	Leu	Ser	Val	Leu	Gly	Glu	Cys	Leu	Asp	His	Phe	Gly	Pro	Gly	Cys
305				310						315				320	
Val	Gly	Val	Gln	Lys	Ile	Leu	Asn	Ala	Arg	Cys	Pro	Leu	Val	Arg	Phe
			325				330						335		
Ser	His	Gln	Ala	Ser	Gly	Phe	Gln	Cys	Asp	Leu	Thr	Thr	Asn	Asn	Arg
		340					345					350			
Ile	Ala	Leu	Thr	Ser	Ser	Glu	Leu	Leu	Tyr	Ile	Tyr	Gly	Ala	Leu	Asp
	355					360				365					
Ser	Arg	Val	Arg	Ala	Leu	Val	Phe	Ser	Val	Arg	Cys	Trp	Ala	Arg	Ala
	370				375					380					
His	Ser	Leu	Thr	Ser	Ser	Ile	Pro	Gly	Ala	Trp	Ile	Thr	Asn	Phe	Ser
385				390						395				400	
Leu	Thr	Met	Met	Val	Ile	Phe	Phe	Leu	Gln	Arg	Arg	Ser	Pro	Pro	Ile
			405				410						415		
Leu	Pro	Thr	Leu	Asp	Ser	Leu	Lys	Thr	Leu	Ala	Asp	Ala	Glu	Asp	Lys
		420					425					430			
Cys	Val	Ile	Glu	Gly	Asn	Asn	Cys	Thr	Phe	Val	Arg	Asp	Leu	Ser	Arg
	435					440				445					
Ile	Lys	Pro	Ser	Gln	Asn	Thr	Glu	Thr	Leu	Glu	Leu	Leu	Leu	Lys	Glu
	450				455					460					
Phe	Phe	Glu	Tyr	Phe	Gly	Asn	Phe	Ala	Phe	Asp	Lys	Asn	Ser	Ile	Asn
465				470						475				480	
Ile	Arg	Gln	Gly	Arg	Glu	Gln	Asn	Lys	Pro	Asp	Ser	Ser	Pro	Leu	Tyr
			485				490						495		
Ile	Gln	Asn	Pro	Phe	Glu	Thr	Ser	Leu	Asn	Ile	Ser	Lys	Asn	Val	Ser
		500					505						510		
Gln	Ser	Gln	Leu	Gln	Lys	Phe	Val	Asp	Leu	Ala	Arg	Glu	Ser	Ala	Trp
	515					520				525					
Ile	Leu	Gln	Gln	Glu	Asp	Thr	Asp	Arg	Pro	Ser	Ile	Ser	Ser	Asn	Arg
	530				535					540					
Pro	Trp	Gly	Leu	Val	Ser	Leu	Leu	Leu	Pro	Ser	Ala	Pro	Asn	Arg	Lys
545				550						555				560	
Ser	Phe	Thr	Lys	Lys	Lys	Ser	Asn	Lys	Phe	Ala	Ile	Glu	Thr	Val	Lys
			565				570						575		
Asn	Leu	Leu	Glu	Ser	Leu	Lys	Gly	Asn	Arg	Thr	Glu	Asn	Phe	Thr	Lys

580 585 590  
Thr Ser Gly Lys Arg Thr Ile Ser Thr Gln Thr  
595 600

<210> 5531  
<211> 3056  
<212> DNA  
<213> Homo sapiens

<400> 5531  
gccccgtccg cgtgacgctc ctgcctgcgc gcggccaagc catgctccgc cccagctcag  
60  
gtaacggagg ccttggaag agactctgcg tcaggtcacc cagcagagat cagcaatcct  
120  
tggctcactg aggaggtttg gatttgcttc aaagggcact gcaaaaattg aacagaggaa  
180  
tcccaaggaa gctgcctgaa ttgctctgta tactctcggt ctgcgactta taaaggacca  
240  
gacaaatcaa attagtgggt ttgggttccg ccagctgtgg atgcctttga cattatgacc  
300  
gcagaggatt ccaccgcagc catgagcagt gactcggccg ccgggtcctc ggccaagggtg  
360  
cccaggggag tggcgggcgc gcccaacgag gcagcactgc tggcgctgat ggagcgacag  
420  
ggctacagca tgggtgcaaga gaacgggcag cgcaagtacg gcggcccacc gcccggtgg  
480  
gagggccgc acccgagcgc tggctgcgag gtcttcgtgg gcaagatccc gcgcgacgtg  
540  
tacgaggacg agctggtgcc cgtgttcgag gccgtgggac gcatctacga gctgcgcctc  
600  
atgatggact ttgacggcaa gaaccgcggc tacgccttcg tcatgtactg ccacaagcac  
660  
gaggccaagc gcgcagtgcg tgagctcaac aactacgaga tccgcccggg ccgcctgctc  
720  
ggcgtgtgct gcagcgtgga caactgccgc ctcttcacgc gcgggatccc caagatgaag  
780  
aagcgcgagg aaatcctgga ggagattgcc aaggtcaccg agggcgtgct ggacgtgatc  
840  
gtctacgcca gcgcggccga caagatgaag aaccgcggct tcgccttcgt ggagtacgag  
900  
agccaccgcg cggctgccat ggctcgcgc aagctcatgc ctggccgcac ccagctgtgg  
960  
ggccaccaga tcgccgtgga ctgggcccag cctgagatcg acgtggacga ggacgtgatg  
1020  
gagaccgtga agatcctcta cgtgcgcaac ctcatgatcg agaccaccga ggacaccatc  
1080  
aagaagagct tcggccagtt caaccccggc tgcgtggagc gcgtcaagaa gatccgcgac  
1140  
tacgccttcg tgcacttcac cagccgcgag gatgccgtgc atgccatgaa caacctcaac  
1200  
ggcactgagc tggagggctc gtgcctggag gtcacgctgg ccaagcccgt ggacaaggag  
1260  
cagtactcgc gctaccagaa ggcagccagg ggcggcggcg cggctgaggc agcgcagcag  
1320

cccagctacg tgtactcctg cgacccctac acactggcct actacggcta cccctacaac  
1380  
gcgctcattg ggcccaacag ggactacttt gtgaaagcag gcagcataag aggccgaggg  
1440  
cgaggtgcag ctggcaacag agccccaggg cctaggggtt cctacctcgg gggatattct  
1500  
gctggccgtg gtatatatag ccgatatcat gaagggaaag gaaagcagca agaaaaagga  
1560  
tatgaactgg tgccgaattt ggaaatccct accgtcaacc cagttgccat taaacctggt  
1620  
acagtagcca tccctgccat tggggctcag tattccatgt ttccagcagc tccagccct  
1680  
aaaatgattg aagatggcaa aatccacaca gtggagcaca tgatcagccc cattgctgtg  
1740  
cagccagacc cagccagtgc tgctgccgcc gcagccgcgg ccgcagccgc cgcagccgct  
1800  
gtcattccca ctgtgtcgac gccaccacct ttccagggcc gccaataac tccagtatac  
1860  
acggtggctc caaacgttca gagaattcct actgccggga tctacggggc cagttacgtg  
1920  
ccatttgctg ctccagctac agccacgac gccacactac agaagaacgc ggcagccgcg  
1980  
gccgccgtgt atggaggata cgcaggctac atacctcagg ccttccctgc tgctgccatt  
2040  
caggtcccca tccccgacgt ctaccagaca tactgaggct ggtgaccagc acgaagacag  
2100  
accacacaaa caccactgaa ggaacgcttg actatttatg aagaaggaac atgttgatt  
2160  
cacacatgca acctgaaagt gaagaatgtt agcagattta tttctgaatt attttatata  
2220  
catgaagttt tcaactagttt tttaagacta ttttcaactt agcatgccta cgttcataca  
2280  
tttccaaaag acttgcaatg gttcgtgcct tcattccatc ttttaaaaat ttgtatgctg  
2340  
tactacattt gtatagaggt ttttggtgtt gtttttttaa ggatatattt tcagtatgaa  
2400  
ggttattttc ttaacttctg cactccagag atttctattt tgtagtacct tcaataatat  
2460  
atcaactata tattaataaaa gcacacttga ggagctaggg aactattttg aaaaatatat  
2520  
acaatattta aagatacaaa cagtagtgct taaaaatact acataaagca ttattttaaa  
2580  
ggttatactg gaaagtgcaa ttttaaaatg agtaaaacct ctgtatttct gctggcatta  
2640  
aggggtgatg gtgttaccat gtatcatcat ggcggtacta ttttttaaaa gaaattaaac  
2700  
actggatctc tccttaagcc aacattgaaa agacttgccg cacttctgag tccaaacact  
2760  
ggaaagctct cctttgccac cgttagccgg ggctcattct ccatgtgcct tagccttaa  
2820  
catgccccca ctcccacatc tctcaccctg tcccctctc cccagattcc caatcccacc  
2880  
gcaatgtttg gcaagcctag gactgataag tagctctgat agaggagctg gtggctttta  
2940

tactttcttcc tgggtttttg ttgggggttg ttgtttcggt gttttttggt ttttttttgg  
3000  
tttggttggg gaagtattgt cttctacgtg tgccattttc agtagcagag taagct  
3056

<210> 5532  
<211> 593  
<212> PRT  
<213> Homo sapiens

<400> 5532  
Met Thr Ala Glu Asp Ser Thr Ala Ala Met Ser Ser Asp Ser Ala Ala  
1 5 10 15  
Gly Ser Ser Ala Lys Val Pro Glu Gly Val Ala Gly Ala Pro Asn Glu  
20 25 30  
Ala Ala Leu Leu Ala Leu Met Glu Arg Thr Gly Tyr Ser Met Val Gln  
35 40 45  
Glu Asn Gly Gln Arg Lys Tyr Gly Gly Pro Pro Pro Gly Trp Glu Gly  
50 55 60  
Pro His Pro Gln Arg Gly Cys Glu Val Phe Val Gly Lys Ile Pro Arg  
65 70 75 80  
Asp Val Tyr Glu Asp Glu Leu Val Pro Val Phe Glu Ala Val Gly Arg  
85 90 95  
Ile Tyr Glu Leu Arg Leu Met Met Asp Phe Asp Gly Lys Asn Arg Gly  
100 105 110  
Tyr Ala Phe Val Met Tyr Cys His Lys His Glu Ala Lys Arg Ala Val  
115 120 125  
Arg Glu Leu Asn Asn Tyr Glu Ile Arg Pro Gly Arg Leu Leu Gly Val  
130 135 140  
Cys Cys Ser Val Asp Asn Cys Arg Leu Phe Ile Gly Gly Ile Pro Lys  
145 150 155 160  
Met Lys Lys Arg Glu Glu Ile Leu Glu Glu Ile Ala Lys Val Thr Glu  
165 170 175  
Gly Val Leu Asp Val Ile Val Tyr Ala Ser Ala Ala Asp Lys Met Lys  
180 185 190  
Asn Arg Gly Phe Ala Phe Val Glu Tyr Glu Ser His Arg Ala Ala Ala  
195 200 205  
Met Ala Arg Arg Lys Leu Met Pro Gly Arg Ile Gln Leu Trp Gly His  
210 215 220  
Gln Ile Ala Val Asp Trp Ala Glu Pro Glu Ile Asp Val Asp Glu Asp  
225 230 235 240  
Val Met Glu Thr Val Lys Ile Leu Tyr Val Arg Asn Leu Met Ile Glu  
245 250 255  
Thr Thr Glu Asp Thr Ile Lys Lys Ser Phe Gly Gln Phe Asn Pro Gly  
260 265 270  
Cys Val Glu Arg Val Lys Lys Ile Arg Asp Tyr Ala Phe Val His Phe  
275 280 285  
Thr Ser Arg Glu Asp Ala Val His Ala Met Asn Asn Leu Asn Gly Thr  
290 295 300  
Glu Leu Glu Gly Ser Cys Leu Glu Val Thr Leu Ala Lys Pro Val Asp  
305 310 315 320  
Lys Glu Gln Tyr Ser Arg Tyr Gln Lys Ala Ala Arg Gly Gly Gly Ala  
325 330 335  
Ala Glu Ala Ala Gln Gln Pro Ser Tyr Val Tyr Ser Cys Asp Pro Tyr

340 345 350  
 Thr Leu Ala Tyr Tyr Gly Tyr Pro Tyr Asn Ala Leu Ile Gly Pro Asn  
 355 360 365  
 Arg Asp Tyr Phe Val Lys Ala Gly Ser Ile Arg Gly Arg Gly Arg Gly  
 370 375 380  
 Ala Ala Gly Asn Arg Ala Pro Gly Pro Arg Gly Ser Tyr Leu Gly Gly  
 385 390 395 400  
 Tyr Ser Ala Gly Arg Gly Ile Tyr Ser Arg Tyr His Glu Gly Lys Gly  
 405 410 415  
 Lys Gln Gln Glu Lys Gly Tyr Glu Leu Val Pro Asn Leu Glu Ile Pro  
 420 425 430  
 Thr Val Asn Pro Val Ala Ile Lys Pro Gly Thr Val Ala Ile Pro Ala  
 435 440 445  
 Ile Gly Ala Gln Tyr Ser Met Phe Pro Ala Ala Pro Ala Pro Lys Met  
 450 455 460  
 Ile Glu Asp Gly Lys Ile His Thr Val Glu His Met Ile Ser Pro Ile  
 465 470 475 480  
 Ala Val Gln Pro Asp Pro Ala Ser Ala Ala Ala Ala Ala Ala Ala  
 485 490 495  
 Ala Ala Ala Ala Ala Ala Val Ile Pro Thr Val Ser Thr Pro Pro Pro  
 500 505 510  
 Phe Gln Gly Arg Pro Ile Thr Pro Val Tyr Thr Val Ala Pro Asn Val  
 515 520 525  
 Gln Arg Ile Pro Thr Ala Gly Ile Tyr Gly Ala Ser Tyr Val Pro Phe  
 530 535 540  
 Ala Ala Pro Ala Thr Ala Thr Ile Ala Thr Leu Gln Lys Asn Ala Ala  
 545 550 555 560  
 Ala Ala Ala Ala Val Tyr Gly Gly Tyr Ala Gly Tyr Ile Pro Gln Ala  
 565 570 575  
 Phe Pro Ala Ala Ala Ile Gln Val Pro Ile Pro Asp Val Tyr Gln Thr  
 580 585 590  
 Tyr

<210> 5533  
 <211> 505  
 <212> DNA  
 <213> Homo sapiens

<400> 5533  
 ncacttgccct ccctgcctgc ttctggctgc cttgaatgcc tggctcctca agctccttct  
 60  
 ggggtctgaca aagcagggac catgtctacc ttggctacc gaagaggact cagtaaatac  
 120  
 gaatccatcg acgaggatga actcctcgcc tcctgtcag ccgaggagct gaaggagcta  
 180  
 gagagagagt tggaagacat tgaacctgac cgcaaccttc ccgtggggct aaggcaaaag  
 240  
 agcctgacag agaaaacccc cacagggaca ttcagcagag aggactgat ggcctattgg  
 300  
 gaaaaggagt cccaaaaact cttggagaag gagaggctgg gggaaatgtgg aaaggttgca  
 360  
 gaagacaaag aggaaagtga ggaagagctt atctttactg aaagtaacag tgaggtttct  
 420



gaggaagtgt atacagagga ggaggaggag ggtcccagg aggaagagga ggaagaagac  
 480  
 agtgacgaag aggaagaac aattg  
 505

<210> 5534  
 <211> 168  
 <212> PRT  
 <213> Homo sapiens

<400> 5534  
 Xaa Leu Ala Ser Leu Pro Ala Ser Gly Cys Leu Glu Cys Leu Val Leu  
 1 5 10 15  
 Gln Ala Pro Ser Gly Ser Asp Lys Ala Gly Thr Met Ser Thr Phe Gly  
 20 25 30  
 Tyr Arg Arg Gly Leu Ser Lys Tyr Glu Ser Ile Asp Glu Asp Glu Leu  
 35 40 45  
 Leu Ala Ser Leu Ser Ala Glu Leu Lys Glu Leu Glu Arg Glu Leu  
 50 55 60  
 Glu Asp Ile Glu Pro Asp Arg Asn Leu Pro Val Gly Leu Arg Gln Lys  
 65 70 75 80  
 Ser Leu Thr Glu Lys Thr Pro Thr Gly Thr Phe Ser Arg Glu Ala Leu  
 85 90 95  
 Met Ala Tyr Trp Glu Lys Glu Ser Gln Lys Leu Leu Glu Lys Glu Arg  
 100 105 110  
 Leu Gly Glu Cys Gly Lys Val Ala Glu Asp Lys Glu Glu Ser Glu Glu  
 115 120 125  
 Glu Leu Ile Phe Thr Glu Ser Asn Ser Glu Val Ser Glu Glu Val Tyr  
 130 135 140  
 Thr Glu Glu Glu Glu Glu Ser Gln Glu Glu Glu Glu Glu Asp  
 145 150 155 160  
 Ser Asp Glu Glu Glu Arg Thr Ile  
 165

<210> 5535  
 <211> 1887  
 <212> DNA  
 <213> Homo sapiens

<400> 5535  
 ngcacgagcc gagccttctc agaccgggg gacgcctaac cccgcgagat gaggaactg  
 60  
 aggccgcgag agccgcacac agcagagaag cagcagaatc gggaatcaaa cccagctctg  
 120  
 tctgacccca gagcctgtgc ctttaaccac tggctaggct gaactgcctt tgttcttcac  
 180  
 tgtcccatc acctcttca aacctcagcc tctcttctc catcggtaca tctctaggct  
 240  
 gcacctgctc tctaaacatt cacacaaacc ctgcaaattt tcttctcat aattgggaga  
 300  
 agactcactg gccgaatggc agcagtagat gacttgcaat ttgaagaatt tggcaatgca  
 360  
 gccacttctc tgacagcaaa cccagatgcc accacagtaa acattgagga tcttggtgaa  
 420

accccaaac atcagccagg atccccaaga ggctcaggaa gagaagaaga tgatgagtta  
480  
ctgggaaatg atgactctga caaaactgag ttacttgctg gacagaagaa aagctcccc  
540  
ttctggacat ttgaatacta ccaaacattc tttgatgtgg acacctacca ggtctttgac  
600  
agaattaaag gatctctttt gccaataccc gggaaaaact ttgtgaggtt atatatccgc  
660  
agcaatccag atctctatgg ccccttttgg atatgtgcca cgttggtctt tgccatagca  
720  
attagtggga atctttccaa cttcttgatc catctgggag agaagacgta ccattatgtg  
780  
cccgaattcc gaaaagtgtc catagcagct accatcatct atgcctatgc ctggctgggt  
840  
cctcttgac tctggggttt cctcatgtgg agaaacagca aagttatgaa catcgtctcc  
900  
tattcatttc tggagattgt gtgtgtctat ggatattccc tcttcattta tatccccacc  
960  
gcaatactgt ggattatccc ccagaaagct gttcgttgga ttctagtcac gattgcctg  
1020  
ggcatctcag gatctctctt ggcaatgaca ttttggccag ctgttcgtga ggataaccga  
1080  
cgcgttgcat tggccacaat tgtgacaatt gtgttgctcc atatgctgct ttctgtgggc  
1140  
tgcttggcat acttttttga tgcaccagag atggaccatc tcccaacaac tacagctact  
1200  
ccaaacaaaa cagttgctgc agccaagtcc agctaagag gaaagactca cttgagatac  
1260  
cctctccttg ctgaagtttt tcttgacttc tccagttctc ttttgttttt tggagcatgg  
1320  
ttctttggga agtggcatcc actgcaggaa agcagaatga gcagagccag cagaactgat  
1380  
ggagtggcac aaattcccag tgtctggatg gtgccacact ggcgcctaata caccgttta  
1440  
acaagcagaa attaaatgtt gctcagcaca tgtgtctttc agctcttcct tttcaccat  
1500  
ggatgatcat tgcgagcatg cgctgattgg actgaaatgc cggggaatag gttaggcatg  
1560  
ctcagtgcg tccctttgcc accacagtca aatgacatgc ttcactgtgg taccttaata  
1620  
cctgaaatag aaccatggaa aattctgatg tcctctctct gaattatgta cagactacct  
1680  
gggggatcct cttctctcca aatgttagcc atcctgaagt agccgaacag tagaaacttt  
1740  
ggtggggatt aaccgggagc ttgaaaattt gtctttggta acctgatact ggacagctga  
1800  
actgaatggc tgcaaaataa atacctcaca tgatgtctgt gtctgcaaaa aaaaaaaaaa  
1860  
aaaaaaaaaa aaaaaaaaaa aaaaaaa  
1887

&lt;210&gt; 5536

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5536

```

Met Ala Ala Val Asp Asp Leu Gln Phe Glu Glu Phe Gly Asn Ala Ala
 1           5           10           15
Thr Ser Leu Thr Ala Asn Pro Asp Ala Thr Thr Val Asn Ile Glu Asp
      20           25           30
Pro Gly Glu Thr Pro Lys His Gln Pro Gly Ser Pro Arg Gly Ser Gly
      35           40           45
Arg Glu Glu Asp Asp Glu Leu Leu Gly Asn Asp Asp Ser Asp Lys Thr
      50           55           60
Glu Leu Leu Ala Gly Gln Lys Lys Ser Ser Pro Phe Trp Thr Phe Glu
65           70           75           80
Tyr Tyr Gln Thr Phe Phe Asp Val Asp Thr Tyr Gln Val Phe Asp Arg
      85           90           95
Ile Lys Gly Ser Leu Leu Pro Ile Pro Gly Lys Asn Phe Val Arg Leu
      100          105          110
Tyr Ile Arg Ser Asn Pro Asp Leu Tyr Gly Pro Phe Trp Ile Cys Ala
      115          120          125
Thr Leu Val Phe Ala Ile Ala Ile Ser Gly Asn Leu Ser Asn Phe Leu
      130          135          140
Ile His Leu Gly Glu Lys Thr Tyr His Tyr Val Pro Glu Phe Arg Lys
145          150          155          160
Val Ser Ile Ala Ala Thr Ile Ile Tyr Ala Tyr Ala Trp Leu Val Pro
      165          170          175
Leu Ala Leu Trp Gly Phe Leu Met Trp Arg Asn Ser Lys Val Met Asn
      180          185          190
Ile Val Ser Tyr Ser Phe Leu Glu Ile Val Cys Val Tyr Gly Tyr Ser
      195          200          205
Leu Phe Ile Tyr Ile Pro Thr Ala Ile Leu Trp Ile Ile Pro Gln Lys
      210          215          220
Ala Val Arg Trp Ile Leu Val Met Ile Ala Leu Gly Ile Ser Gly Ser
225          230          235          240
Leu Leu Ala Met Thr Phe Trp Pro Ala Val Arg Glu Asp Asn Arg Arg
      245          250          255
Val Ala Leu Ala Thr Ile Val Thr Ile Val Leu Leu His Met Leu Leu
      260          265          270
Ser Val Gly Cys Leu Ala Tyr Phe Phe Asp Ala Pro Glu Met Asp His
      275          280          285
Leu Pro Thr Thr Thr Ala Thr Pro Asn Gln Thr Val Ala Ala Ala Lys
      290          295          300
Ser Ser
305

```

&lt;210&gt; 5537

&lt;211&gt; 2881

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5537

```

gcctgcctct tccagagaga ctccccatt gctgtctctt gtgtgtgtca tgcacaagga
60
aggcttggtt gtgtgccagg ataaggggca caagggcctc ggggtgtggcc agagacccca
120

```

tgccttaagct tttatggtat aggtcaggct gcagggggtt gagggcctca gttgtatatc  
180  
agaatcttca gagcactgcg atgttcaggg gtgagtcagg tctgtagatg tgcacggggg  
240  
cttctgaagg gtcagtttct gtaatcactt tcagggtgtgt cagggccttg tgcagtaaca  
300  
gtgcacacag aagttagtgt ttctgtgggc taagggttgt agctctgtat caggattctg  
360  
ggagtgggtc tggatttctg gtgtgtggac ttaagaagct gtgtcagact tgggggaggg  
420  
gcgttcatgt ataactgggt tcacataggc caagactccc aggtgcattt taggcagagc  
480  
ctcagggtgt ttagaggctc caggggcaga gaggctatag gtgctgtcag aggccttggg  
540  
gacatttagg gcagagcctc gaggacagg tcctgggaca gtgggagcca agggcaagtg  
600  
ctagagttgc agtgaattta gagcaaagcc tcagctaagt gacacatccc agggcagtag  
660  
gggatctatc taggttcgtg ctgggcctca ggtaagtgc aggccttagg acaatggggg  
720  
ctgtggcatg cgtcagggtt cctgccttga tatgggatcg tgacaggccc ctccctatgt  
780  
gcaggagaca agcagcccaa gaaacaggag aaaaacccag tgttgggtgc cccagagttt  
840  
gtggatgaag ctctgtgtgc gtgcgaggag taccttagca acttggccca catggacatc  
900  
gacaaggacc tggaggcccc gctgtacctc acccccaggg gctggtcctt ctccctccag  
960  
cgctactacc aagtgggtcca cgaaggggca gaactcaggc acctcgacac tcagggtccag  
1020  
cgctgtgagg acatcctgca gcagctgcag gccgtggtag cccagataga catggaaggg  
1080  
gatcgcaaca tctggatcgt gaagccagga gccaaagtccc gtggacgagg catcatgtgc  
1140  
atggaccacc tggaggagat gctgaagctg gtgaacggca acccgtgggt gatgaaggac  
1200  
ggcaagtggg tgggtgcagaa gtatatgtag cggcccctcc tcactcttgg caccaagttt  
1260  
gacctcagac agtgggttct ggtaactgac tggaaacccac ttaccgtgtg gttctaccgc  
1320  
gacagctata tccgcttttc cagcagccc ttctccctga agaacctgga caactcagtg  
1380  
cacctgtgca acaactccat ccagaagcac ctggagaact catgccatcg gcatccactg  
1440  
cttccgccag acaacatgtg gtctagccag aggttccagg cccacctgca ggagatgggt  
1500  
gccccaaatg cttgggtccac catcatcgtg cctggcatga aggatgctgt gatccacgca  
1560  
cttcagacct cccaggacac cgtgcagtgt cggaaggcca gctttgagct ctatggcgct  
1620  
gacttcgtgt tcggggagga cttccagccc tggctgattg agatcaacgc cagccccacg  
1680  
atggcacctt ccacagcagt cactgcccgg ctctgtgctg gcgtgcaagc tgacaccctg  
1740

cgcgtggtca ttgaccggag gctggaccgc aactgtgaca caggagcctt tgagctcatc  
1800  
tataagcagc ccgtcaccac ttccccagcc tccacaccaa ggcccagctg ccttctcccc  
1860  
atgtactccg acaccagggc caggctctca gacgacagca cagcaagctg gtgggcacta  
1920  
aggccctgtc gaccacaggc aaggccttga ggactctacc cacggctaag gtcttcattt  
1980  
ccctcccacc gaaccttgat ttcaagggtg caccacagcat cctgaagcca agaaagggtg  
2040  
gcctcgacct gtgactcaca ccagtgaggc agtgctgagc acggggtcag ggctggaggg  
2100  
cacaggcaga gggcagctcc caggctggct ggacacccaa gggaagagct ggtctccctc  
2160  
agaagccctt tctccacag acttctgac atctccctct tctccctcc tttcacaccg  
2220  
aggctcctgc tctcctgtgc ctccgaggcc ccagctgga agtgccctgt tgcctctgcc  
2280  
ctttgaagtc ggaacaattc ctagcacctg tcggaaggtc aaggccaaag gcaaattcaa  
2340  
ggccagactg tgacaaaccc agggctgagg cctgccccat gaagaggctg agccccctga  
2400  
aaccctgcc ccttggttgg acattccaga ggcgcagggg cctgggggat atgaagctag  
2460  
ggaagccctt gcttcgattc ccactgccc ttgtcctgga tccaacacca aataaaaaga  
2520  
aacaagtga gtatttgggg cttgactcca ttgctgttgg agggtaaga gtggatgggg  
2580  
cgaggccgtg taccacaggg tccacagcaa gagcctgagg ccatcagcag ctctccgtg  
2640  
cagcgaggcc cagaattccc acctaggac agacatgggg ctctctattt agggactccc  
2700  
ccagcatctc cgatccaggg gtggggagcg tgagccttca ctttacagat gaagaaactg  
2760  
agtctgaaag aggaggcatg gcttacccaa gatcacgtgg cagtgagtcg acgcagggac  
2820  
atattgccag aactgccgag cactgggagc cccccaaccc cagagaacaa gccaagctag  
2880  
c  
2881

&lt;210&gt; 5538

&lt;211&gt; 352

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5538

Met	Asp	Ile	Asp	Lys	Asp	Leu	Glu	Ala	Pro	Leu	Tyr	Leu	Thr	Pro	Glu
1				5					10					15	
Gly	Trp	Ser	Leu	Phe	Leu	Gln	Arg	Tyr	Tyr	Gln	Val	Val	His	Glu	Gly
			20					25					30		
Ala	Glu	Leu	Arg	His	Leu	Asp	Thr	Gln	Val	Gln	Arg	Cys	Glu	Asp	Ile
			35				40					45			
Leu	Gln	Gln	Leu	Gln	Ala	Val	Val	Pro	Gln	Ile	Asp	Met	Glu	Gly	Asp

50	55	60
Arg Asn Ile Trp Ile Val Lys Pro Gly Ala Lys Ser Arg Gly Arg Gly		
65	70	75
Ile Met Cys Met Asp His Leu Glu Glu Met Leu Lys Leu Val Asn Gly		80
	85	90
Asn Pro Val Val Met Lys Asp Gly Lys Trp Val Val Gln Lys Tyr Ile		95
	100	105
Glu Arg Pro Leu Leu Ile Phe Gly Thr Lys Phe Asp Leu Arg Gln Trp		110
	115	120
Phe Leu Val Thr Asp Trp Asn Pro Leu Thr Val Trp Phe Tyr Arg Asp		125
	130	135
Ser Tyr Ile Arg Phe Ser Thr Gln Pro Phe Ser Leu Lys Asn Leu Asp		140
145	150	155
Asn Ser Val His Leu Cys Asn Asn Ser Ile Gln Lys His Leu Glu Asn		160
	165	170
Ser Cys His Arg His Pro Leu Leu Pro Pro Asp Asn Met Trp Ser Ser		175
	180	185
Gln Arg Phe Gln Ala His Leu Gln Glu Met Gly Ala Pro Asn Ala Trp		190
	195	200
Ser Thr Ile Ile Val Pro Gly Met Lys Asp Ala Val Ile His Ala Leu		205
	210	215
Gln Thr Ser Gln Asp Thr Val Gln Cys Arg Lys Ala Ser Phe Glu Leu		220
225	230	235
Tyr Gly Ala Asp Phe Val Phe Gly Glu Asp Phe Gln Pro Trp Leu Ile		240
	245	250
Glu Ile Asn Ala Ser Pro Thr Met Ala Pro Ser Thr Ala Val Thr Ala		255
	260	265
Arg Leu Cys Ala Gly Val Gln Ala Asp Thr Leu Arg Val Val Ile Asp		270
	275	280
Arg Arg Leu Asp Arg Asn Cys Asp Thr Gly Ala Phe Glu Leu Ile Tyr		285
	290	295
Lys Gln Pro Val Thr Thr Ser Pro Ala Ser Thr Pro Arg Pro Ser Cys		300
305	310	315
Leu Leu Pro Met Tyr Ser Asp Thr Arg Ala Arg Ser Ser Asp Asp Ser		320
	325	330
Thr Ala Ser Trp Trp Ala Leu Arg Pro Cys Arg Pro Gln Ala Arg Pro		335
	340	345
		350

&lt;210&gt; 5539

&lt;211&gt; 1887

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5539

nnnttagaag gttagtgttg gttcttgtat tcgattaaac aggaatacac atatgtctac

60

caaagaatag gtaagggaga aataagaaca ctaaaaaaac tcggaatcgt taagtgtgaa

120

gcatatttgg agttaaaaga accaaatatt actaagtaag cagacgcggg cacgcgctgc

180

ataccgggat ttgtagtccc ttccggggcg gggtagacgcg cgctgcgca gaggggcccgt

240

cgctcttccg ggcgcagtcg tgcggcagcg gcgccaggac tgactgcgcc gtggaggctg

300

ctgcagtgtt gtgagttgga agctggggag ctcgccatgg cggccccgc tgcagccatg  
360  
gggccctcgg cgttgggcca gagcgccccc ggctcgatgg ccccgagggtg ctcaagtgagc  
420  
agcgggccgt cgcgctacgt gcttgggatg caggagctgt tccggggcca cagcaagacg  
480  
cgcgagttcc tggcgcacag cgccaagggtg cactcggtgg cctggagttg cgacgggctg  
540  
cgcttagcct cggggtcctt cgacaagacg gccagcgtct tcttgctgga gaggaccggt  
600  
tggtcaaaga aaacaattat cggggacatg gggatangtg tggaccagct ttgttggcat  
660  
ccaagtaatc ctgacctatt tggtacggcg tccggagata aaaccattcg catctgggat  
720  
gtgaggacta caaaatgcat tgccactgtg aacactaaag gggagaacat taatatctgc  
780  
tggagtcttg atgggcagac cattgctgta ggcaacaagg atgatgtggg gacctttatt  
840  
gatgccaaga cacaccgttc caaagcagaa gagcagttca agttcgaggc caacgaaatc  
900  
tcttggaaaca atgacaataa tatgtttctc ctgacaaatg gcaatgggtg tatcaacatc  
960  
ctcagctacc cagaactgaa gcctgtgcag tccatcaacg cccatccttc caactgcac  
1020  
tgtatcaagt ttgaccccat ggggaagtac tttgccacag gaagtgcaga tgctttgggc  
1080  
agcctctggg atgtggatga gttagtgtgt gttcggtgct tttccaggct ggattggcct  
1140  
gtaagaacce tcagtttcag ccatgatggg aaaatgctgg cgtcagcatc ggaagatcat  
1200  
tttattgaca ttgctgaagt ggagacaggg gacaaactat gggaggtaca gtgtgagtct  
1260  
ccgaccttca cagtggcgtg gcaccccaaa aggcctctgc tggcatttgc ctgtgatgac  
1320  
aaagacggca aatatgacag cagccgggaa gccgggaactg tgaagctgtt tgggcttcct  
1380  
aatgattctt gagaggaggt tgtagggaga ggaggccccg gcagaggtct tccttcattg  
1440  
ggttagtgtg gtctgttctc tcggagttgg tgggcacct aaatatttgt aagttgggtat  
1500  
aaattgtaaa cgtctctggt caggctgcgc atttcgttct tttgctttgt ctgtgtatta  
1560  
gctctttcca ttctttgccc ccagcatgag ttaactcgcg tggactctgc agtgcgagta  
1620  
gtgacccag catacctgt cctctggacc tctgtcttc tctgctctg ggtgcatggt  
1680  
agactttgtg gcatttgata caacttgac aatacctagt ttggaggag gggaatggaa  
1740  
gggcatggaa gtttttttaa ataattaaaa aaatatatat ataattttga gaattgagca  
1800  
tttaataaac tgacttttgt tattatggaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1860  
aaaaaaaaa aaaaaaaaaa aaaaaa  
1887

<210> 5540  
<211> 378  
<212> PRT  
<213> Homo sapiens

<400> 5540  
Met Arg Ala Ala Ala Pro Gly Leu Thr Ala Pro Trp Arg Leu Leu  
1 5 10 15  
Gln Cys Cys Glu Leu Glu Ala Gly Glu Leu Gly Met Ala Val Pro Ala  
20 25 30  
Ala Ala Met Gly Pro Ser Ala Leu Gly Gln Ser Gly Pro Gly Ser Met  
35 40 45  
Ala Pro Trp Cys Ser Val Ser Ser Gly Pro Ser Arg Tyr Val Leu Gly  
50 55 60  
Met Gln Glu Leu Phe Arg Gly His Ser Lys Thr Arg Glu Phe Leu Ala  
65 70 75 80  
His Ser Ala Lys Val His Ser Val Ala Trp Ser Cys Asp Gly Arg Arg  
85 90 95  
Leu Ala Ser Gly Ser Phe Asp Lys Thr Ala Ser Val Phe Leu Leu Glu  
100 105 110  
Arg Thr Gly Trp Ser Lys Lys Thr Ile Ile Gly Asp Met Gly Ile Xaa  
115 120 125  
Val Asp Gln Leu Cys Trp His Pro Ser Asn Pro Asp Leu Phe Val Thr  
130 135 140  
Ala Ser Gly Asp Lys Thr Ile Arg Ile Trp Asp Val Arg Thr Thr Lys  
145 150 155 160  
Cys Ile Ala Thr Val Asn Thr Lys Gly Glu Asn Ile Asn Ile Cys Trp  
165 170 175  
Ser Pro Asp Gly Gln Thr Ile Ala Val Gly Asn Lys Asp Asp Val Val  
180 185 190  
Thr Phe Ile Asp Ala Lys Thr His Arg Ser Lys Ala Glu Glu Gln Phe  
195 200 205  
Lys Phe Glu Val Asn Glu Ile Ser Trp Asn Asn Asp Asn Asn Met Phe  
210 215 220  
Phe Leu Thr Asn Gly Asn Gly Cys Ile Asn Ile Leu Ser Tyr Pro Glu  
225 230 235 240  
Leu Lys Pro Val Gln Ser Ile Asn Ala His Pro Ser Asn Cys Ile Cys  
245 250 255  
Ile Lys Phe Asp Pro Met Gly Lys Tyr Phe Ala Thr Gly Ser Ala Asp  
260 265 270  
Ala Leu Val Ser Leu Trp Asp Val Asp Glu Leu Val Cys Val Arg Cys  
275 280 285  
Phe Ser Arg Leu Asp Trp Pro Val Arg Thr Leu Ser Phe Ser His Asp  
290 295 300  
Gly Lys Met Leu Ala Ser Ala Ser Glu Asp His Phe Ile Asp Ile Ala  
305 310 315 320  
Glu Val Glu Thr Gly Asp Lys Leu Trp Glu Val Gln Cys Glu Ser Pro  
325 330 335  
Thr Phe Thr Val Ala Trp His Pro Lys Arg Pro Leu Leu Ala Phe Ala  
340 345 350  
Cys Asp Asp Lys Asp Gly Lys Tyr Asp Ser Ser Arg Glu Ala Gly Thr  
355 360 365  
Val Lys Leu Phe Gly Leu Pro Asn Asp Ser



370

375

<210> 5541  
<211> 1854  
<212> DNA  
<213> Homo sapiens

<400> 5541  
nnccgagctgg cagctccagg ctccggagcc atgccctgca cggaccctcg tctttaccac  
60  
gctcctgagg aatgaaagga acccagggac cctcagaagg cagcagtgat gcggaccaac  
120  
cccccgagc ctgcaccctt ccgagggcca taggcgaccc agggaaactgg agagagctcc  
180  
agaaaggaaa tcccagcttt cccaaagtcc ctgtggatgc tgacaaaagg agacctgaat  
240  
ttttggaaga gcctgtacta gggtaccgg ctgcagagtg attttccct ccggcactga  
300  
ctctccccct ccaacccccca gccgtccaga gtaccatgaa gaattatgag gatgtgtgac  
360  
agaggatatcc agatgttgat caccactgta ggagcctttg ccgcttttag tttaatgacc  
420  
attgcagtgg gcacggacta ctggttatat tccagaggtg tgtgcaggac taaatctaca  
480  
agtgataatg aaaccagcag gaagaatgaa gaagtaatga ccattcggg gctgtggagg  
540  
acctgtgcc tagaaggggc tttccgaggc gtgtgcaaga aaatcgatca ctccctgaa  
600  
gatgctgact acgaacagga cacagccgaa tatctcctgc gagctgtgag ggcctccagt  
660  
gtcttcccca tcctcagtgt cagcgtgctg ttcttcggcg ggctctgcgt ggcagccagt  
720  
gagttccacc gcagcagaca caacgtcatt ctcagcggcg gcattctttt tgtctctgca  
780  
gggttaagca acatcattgg catcatagtt tatatatcag ccaacgccgg agacccggg  
840  
cagcgtgact ccaaaaaaag ttactcctat gggttggtcct tttatttcgg agccttctct  
900  
ttcatcatcg cagaaattgt aggagtgggt gccgtgcaca tctatatattgaaaacatcag  
960  
cagttacgag ccaaatecca ctcgaggttc ctgaagaaat ctacttttgc ccgcctccca  
1020  
ccctacaggt atcgattccg gaggcgggtca agttctcgct ccaccgagcc cagatcccga  
1080  
gacctgtccc ccatcagcaa aggcttcac accatccctt ccaactgacat ctcgatgttc  
1140  
accctctccc gggaccctc aaagatcacc atggggaccc tcctcaactc cgaccgggac  
1200  
cacgcttttc tacagttcca caattccaca ccaaagagt tcaaagagtc actgcataat  
1260  
aatccggcca acaggcgac cacgcccgtc tgaactgacc tctgacctct gccccacgcc  
1320  
cagcacagcc ttgggggaag tgtacagaga tgtctctgag gttgcatggc atggtccttg  
1380

4722

tgatgggtatt actttttaca aagaatgaaa ccaaattggac tcagccctct cccacatttt  
 1440  
 cccctcacc tccaagtcct aaccctcca tcctctctaa cttttcaagc caatccctta  
 1500  
 atgtcattcc tctctctgtg tatctgtgcc agatgttttc ctttcttctt tctttactgg  
 1560  
 aaggacctcc acattcttcc ctcttggaa gaggacttta ctaaaagtca caggtgggtg  
 1620  
 ccagggggga tttccgaatc tccatcaggc gcgctcatag ttgtcccat tgtctacca  
 1680  
 cacaaatcct caggaaacca accaccgcc aggtggccct gagggaggca ttcacctta  
 1740  
 tgtgttagaa aaacatgacc agaaatcaaa gatgtcagag ccccgaagca gctaattgaa  
 1800  
 taagcactca tggtattaaa ggttttgcct tgctgtaacc aaccgaaaaa aaaa  
 1854

&lt;210&gt; 5542

&lt;211&gt; 315

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5542

Met	Arg	Met	Cys	Asp	Arg	Gly	Ile	Gln	Met	Leu	Ile	Thr	Thr	Val	Gly
1			5					10						15	
Ala	Phe	Ala	Ala	Phe	Ser	Leu	Met	Thr	Ile	Ala	Val	Gly	Thr	Asp	Tyr
		20					25					30			
Trp	Leu	Tyr	Ser	Arg	Gly	Val	Cys	Arg	Thr	Lys	Ser	Thr	Ser	Asp	Asn
	35					40					45				
Glu	Thr	Ser	Arg	Lys	Asn	Glu	Val	Met	Thr	His	Ser	Gly	Leu	Trp	
	50				55				60						
Arg	Thr	Cys	Cys	Leu	Glu	Gly	Ala	Phe	Arg	Gly	Val	Cys	Lys	Lys	Ile
65				70					75						80
Asp	His	Phe	Pro	Glu	Asp	Ala	Asp	Tyr	Glu	Gln	Asp	Thr	Ala	Glu	Tyr
			85					90					95		
Leu	Leu	Arg	Ala	Val	Arg	Ala	Ser	Ser	Val	Phe	Pro	Ile	Leu	Ser	Val
	100						105					110			
Thr	Leu	Leu	Phe	Phe	Gly	Gly	Leu	Cys	Val	Ala	Ala	Ser	Glu	Phe	His
	115					120						125			
Arg	Ser	Arg	His	Asn	Val	Ile	Leu	Ser	Ala	Gly	Ile	Phe	Phe	Val	Ser
	130				135					140					
Ala	Gly	Leu	Ser	Asn	Ile	Ile	Gly	Ile	Ile	Val	Tyr	Ile	Ser	Ala	Asn
145				150					155						160
Ala	Gly	Asp	Pro	Gly	Gln	Arg	Asp	Ser	Lys	Lys	Ser	Tyr	Ser	Tyr	Gly
			165					170				175			
Trp	Ser	Phe	Tyr	Phe	Gly	Ala	Phe	Ser	Phe	Ile	Ile	Ala	Glu	Ile	Val
		180					185					190			
Gly	Val	Val	Ala	Val	His	Ile	Tyr	Ile	Glu	Lys	His	Gln	Gln	Leu	Arg
	195					200						205			
Ala	Lys	Ser	His	Ser	Glu	Phe	Leu	Lys	Lys	Ser	Thr	Phe	Ala	Arg	Leu
	210					215					220				
Pro	Pro	Tyr	Arg	Tyr	Arg	Phe	Arg	Arg	Arg	Ser	Ser	Ser	Arg	Ser	Thr
225					230					235					240
Glu	Pro	Arg	Ser	Arg	Asp	Leu	Ser	Pro	Ile	Ser	Lys	Gly	Phe	His	Thr

```
<210> 5543
<211> 4021
<212> DNA
<213> Homo sapiens
```

<400>	5543				
60	nttagggcag	agctgggcct	gcagctttag	ggcctccctg	ccctcctgc
120	gcccggccgg	atgaggcact	tccctacagt	gtgggtcccg	tgggcagtgg
180	cctgtgctgt	gcgggctgcc	cgaccacctt	cccttcggtc	tgatccccgc
240	cccctccctg	gcatgctgct	ggtgcccagg	gctcaggggc	tcgtggagat
300	atctatgaga	cagaatcctg	tttctcagca	gatgggatgt	caggtcggga
360	gaaatcctgc	cgcggaactt	tctgcacagc	atccctgtga	cagtggaggt
420	ctgccaaag	ccatgcccg	ttccatgggg	ggtgggggtg	gaggcagccc
480	gagctacggg	gggctctggg	gggctctgtg	gaccccacac	tgcgggagca
540	caggagctcc	tggcgctcaa	gcagcagcag	cagctgcaga	agcagctcct
600	ttccagaaac	agcatgacca	cctgacaagg	cagcatgagg	tccagctgca
660	aagcagcagc	aggagatgct	ggcagccaag	cagcagcagg	agatgctggc
720	cagcaggagc	tggagcagca	gcggcagcgg	gagcagcagc	ggcaggaaga
780	cagcggtctg	agcagcagct	gctcatcctg	cggaacaagg	agaagagcaa
840	attgccagca	ctgaggtaaa	gctgaggctc	caggaattcc	tcttgtcgaa
900	cccacaccag	gcggcctcaa	ccattccctc	ccacagcacc	ccaaatgctg
960	catgcttctt	tggaccagag	ttccccctcc	cagagcggcc	ccctggggac
1020	tacaaaactgc	ctttgcctgg	gccctacgac	agtcgagacg	acttccccct
1080	gcctctgaac	ccaacttgaa	agtgcgttca	aggctaaaac	agaaggtggc
1140	agcagtcctc	tcctgcgtcg	caaggatggg	actgttatta	gcacctttaa

gttgagatca caggtgccgg gcctggggcg tcgtccgtgt gtaacagcgc acccgggtcc  
1200  
ggccccagct ctcccaacag ctcccacagc accatcgctg agaatggctt tactgggtca  
1260  
gtccccaaca tcccactga gatgctccct cagcaccgag cctccctct ggacagctcc  
1320  
cccaaccagt tcagctctta cagctctct tctctgccc acatctccct agggctgcag  
1380  
gccacgggtca ctgtcaccaa ctcacacctc actgcctccc cgaagctgtc gacacagcag  
1440  
gaggccgaga ggcaggccct ccagtccttg cggcagggtg gcacgctgac cggcaagttc  
1500  
atgagcacat cctctattcc tggttgctg ctgggcgtgg cactggaggg cgacggggagc  
1560  
ccccacgggc atgcctccct gctgcagcat gtgctgttgc tggagcaggc ccggcagcag  
1620  
agcaccctca ttgctgtgcc actccacggg cagtccccac tagtgacggg tgaacgtgtg  
1680  
gccaccagca tgcggacggg aggaagctc ccgcggcatc ggccccctgag ccgcactcag  
1740  
tcctcaccgc tgcgcagag tccccaggcc ctgcagcagc tggatcatgca acaacagcac  
1800  
cagcagttcc tggagaagca gaagcagcag cagctacagc tgggcaagat cctcaccaag  
1860  
acaggggagc tgcccaggca gcccaccacc caccctgagg agacagagga ggagctgacg  
1920  
gagcagcagg aggtcttgct gggggaggga gccctgacca tgccccggga gggctccaca  
1980  
gagagtgaga gcacacagga agacctggag gaggaggacg aggaagagga tggggaggag  
2040  
gaggaggatt gcatccaggc taaggacgag gagggcgaga gtggtgctga ggaggggccc  
2100  
gacttggagg agcctggtgc tggatacaaa aaactgttct cagatgccc ggcgtgcag  
2160  
cctttgcagg tgtaccaggc gcccctcagc ctggccactg tgccccacca ggcctgggc  
2220  
cgtaccagc cctccctgc tgcccctggg ggcctgaaga gccccccaga ccagcccgtc  
2280  
aagcacctct tcaccacagg tgtggtctac gacacgttca tgctaaagca ccagtgcag  
2340  
tgcgggaaca cacacgtgca ccctgagcat gctggccgga tccagagcat ctggtcccgg  
2400  
ctgcaggaga caggcctgct tagcaagtgc gagcggatcc gaggtcgcaa agccacgcta  
2460  
gatgagatcc agacagtgca ctctgaatac cacacctgc tctatgggac cagtcccctc  
2520  
aaccggcaga agctagacag caagaagttg ctcgccccca tcagccagaa gatgtatgct  
2580  
gtgctgcctt gtgggggcat cggggtggac agtgacaccg tgtggaatga gatgcactcc  
2640  
tccagtgtg tgcgcagggc agtgggctgc ctgctggagc tggccttcaa ggtggctgca  
2700  
ggagagctca agaattgatt tgccatcatc cggccccag gacaccacgc cgaggaatcc  
2760

acagccatgg gattctgctt cttcaactct gtagccatca ccgcaaaact cctacagcag  
2820  
aagttgaacg tgggcaaggc cctcatcgtg gactgggaca ttcaccatgg caatggcacc  
2880  
cagcaggcgt tctacaatga cccctctgtg ctctacatct ctctgcatcg ctatgacaac  
2940  
gggaacttct ttccaggctc tggggctcct gaagagggtg gtggaggacc aggcgtgggg  
3000  
tacaatgtga acgtggcatg gacaggaggc gtggaccccc ccattggaga cgtggaatac  
3060  
cttacagcct tcaggacagt ggtgatgccc attgccacg agttctcacc tgatgtggtc  
3120  
ctagtctccg ctgggtttga tgctgttgaa ggacatctgt ctccactggg tggctactct  
3180  
gtcaccgcca gatgttttgg ccacttgacc aggcagctga tgaccctggc agggggcccg  
3240  
gtggtgctgg ccctggaggc aggcacatgac ttgaccgcca tctgtgatgc ctctgaggct  
3300  
tgtgtctcgg ctctgctcag tgtagagctg cagcccttgg atgaggcagt cttgcagcaa  
3360  
aagcccaaca tcaacgcagt ggccacgcta gagaaagtca tcgagatcca gagcaaacac  
3420  
tggagctgtg tgcagaagtt cgccgctggt ctgggcccgt ccctgcgaga ggcccaagca  
3480  
ggtgagaccg aggaggccga gactgtgagc gccatggcct tgctgtcggc gggggccgag  
3540  
caggcccagg ctgcggcagc ccgggaacac agccccaggc cggcagagga gcccatggag  
3600  
caggagcctg ccctgtgacg ccccgccccc catccctctg ggcttcacca ttgtgatttt  
3660  
gtttattttt tctattaaaa acaaaaagtc acacattcaa caaggtgtgc cgtgtgggtc  
3720  
tctcagcctt gcccctcctg ctccctctacg ctgcctcagg ccccagccc tgtggcttcc  
3780  
acctcagctc tagaagcctg ctccctctgc aggggggtgg ggtgtcttcc cagccctgtc  
3840  
ccatgtgtcc ctccacccat tttcctgcat tctgtctgtc cttttcctcc ttggagcctg  
3900  
ggccagctca aggtgggcac gggggcccag acagtactct ccagttctgg ggccccccga  
3960  
gtgaggaggc aacgggaagt cgggtgcctt gtttcagctg attttggggg gaaatgcctt  
4020  
a  
4021

<210> 5544

<211> 1141

<212> PRT

<213> Homo sapiens

<400> 5544

Met	Leu	Leu	Val	Pro	Lys	Ala	Gln	Gly	Leu	Val	Glu	Met	Leu	Gln	Thr
1				5				10					15		
Ile	Tyr	Glu	Thr	Glu	Ser	Cys	Phe	Ser	Ala	Asp	Gly	Met	Ser	Gly	Arg

			20					25				30			
Glu	Pro	Ser	Leu	Glu	Ile	Leu	Pro	Arg	Thr	Ser	Leu	His	Ser	Ile	Pro
		35					40					45			
Val	Thr	Val	Glu	Val	Lys	Pro	Val	Leu	Pro	Arg	Ala	Met	Pro	Ser	Ser
	50					55					60				
Met	Gly	Gly	Gly	Gly	Gly	Gly	Ser	Pro	Ser	Pro	Val	Glu	Leu	Arg	Gly
65					70					75					80
Ala	Leu	Val	Gly	Ser	Val	Asp	Pro	Thr	Leu	Arg	Glu	Gln	Gln	Leu	Gln
				85					90					95	
Gln	Glu	Leu	Leu	Ala	Leu	Lys	Gln	Gln	Gln	Gln	Leu	Gln	Lys	Gln	Leu
			100					105					110		
Leu	Phe	Ala	Glu	Phe	Gln	Lys	Gln	His	Asp	His	Leu	Thr	Arg	Gln	His
		115					120					125			
Glu	Val	Gln	Leu	Gln	Lys	His	Leu	Lys	Gln	Gln	Gln	Glu	Met	Leu	Ala
	130					135					140				
Ala	Lys	Gln	Gln	Gln	Glu	Met	Leu	Ala	Ala	Lys	Arg	Gln	Gln	Glu	Leu
145					150					155					160
Glu	Gln	Gln	Arg	Gln	Arg	Glu	Gln	Gln	Arg	Gln	Glu	Glu	Leu	Glu	Lys
				165					170					175	
Gln	Arg	Leu	Glu	Gln	Gln	Leu	Leu	Ile	Leu	Arg	Asn	Lys	Glu	Lys	Ser
			180					185					190		
Lys	Glu	Ser	Ala	Ile	Ala	Ser	Thr	Glu	Val	Lys	Leu	Arg	Leu	Gln	Glu
		195					200					205			
Phe	Leu	Leu	Ser	Lys	Ser	Lys	Glu	Pro	Thr	Pro	Gly	Gly	Leu	Asn	His
	210					215					220				
Ser	Leu	Pro	Gln	His	Pro	Lys	Cys	Trp	Gly	Ala	His	His	Ala	Ser	Leu
225					230					235					240
Asp	Gln	Ser	Ser	Pro	Pro	Gln	Ser	Gly	Pro	Pro	Gly	Thr	Pro	Pro	Ser
				245					250					255	
Tyr	Lys	Leu	Pro	Leu	Pro	Gly	Pro	Tyr	Asp	Ser	Arg	Asp	Asp	Phe	Pro
			260					265					270		
Leu	Arg	Lys	Thr	Ala	Ser	Glu	Pro	Asn	Leu	Lys	Val	Arg	Ser	Arg	Leu
		275					280					285			
Lys	Gln	Lys	Val	Ala	Glu	Arg	Arg	Ser	Ser	Pro	Leu	Leu	Arg	Arg	Lys
	290					295					300				
Asp	Gly	Thr	Val	Ile	Ser	Thr	Phe	Lys	Lys	Arg	Ala	Val	Glu	Ile	Thr
305					310					315					320
Gly	Ala	Gly	Pro	Gly	Ala	Ser	Ser	Val	Cys	Asn	Ser	Ala	Pro	Gly	Ser
				325					330					335	
Gly	Pro	Ser	Ser	Pro	Asn	Ser	Ser	His	Ser	Thr	Ile	Ala	Glu	Asn	Gly
			340					345					350		
Phe	Thr	Gly	Ser	Val	Pro	Asn	Ile	Pro	Thr	Glu	Met	Leu	Pro	Gln	His
		355					360					365			
Arg	Ala	Leu	Pro	Leu	Asp	Ser	Ser	Pro	Asn	Gln	Phe	Ser	Leu	Tyr	

450		455		460
Gln His Val Leu Leu Leu	Glu Gln Ala Arg	Gln Gln Ser Thr Leu Ile		
465	470	475	480	
Ala Val Pro Leu His Gly	Gln Ser Pro Leu Val Thr Gly	Glu Arg Val		
485	490	495		
Ala Thr Ser Met Arg Thr	Val Gly Lys Leu Pro Arg His Arg	Pro Leu		
500	505	510		
Ser Arg Thr Gln Ser Ser	Pro Leu Pro Gln Ser Pro Gln Ala Leu Gln			
515	520	525		
Gln Leu Val Met Gln Gln	Gln His Gln Gln Phe Leu Glu Lys Gln Lys			
530	535	540		
Gln Gln Gln Leu Gln Leu	Gly Lys Ile Leu Thr Lys Thr Gly Glu Leu			
545	550	555	560	
Pro Arg Gln Pro Thr Thr	His Pro Glu Glu Thr Glu Glu Glu Leu Thr			
565	570	575		
Glu Gln Gln Glu Val Leu	Leu Gly Glu Gly Ala Leu Thr Met Pro Arg			
580	585	590		
Glu Gly Ser Thr Glu Ser	Glu Ser Thr Gln Glu Asp Leu Glu Glu Glu			
595	600	605		
Asp Glu Glu Glu Asp Gly	Glu Glu Glu Asp Cys Ile Gln Val Lys			
610	615	620		
Asp Glu Glu Gly Glu Ser	Gly Ala Glu Glu Gly Pro Asp Leu Glu Glu			
625	630	635	640	
Pro Gly Ala Gly Tyr Lys	Lys Leu Phe Ser Asp Ala Gln Pro Leu Gln			
645	650	655		
Pro Leu Gln Val Tyr Gln	Ala Pro Leu Ser Leu Ala Thr Val Pro His			
660	665	670		
Gln Ala Leu Gly Arg Thr	Gln Ser Ser Pro Ala Ala Pro Gly Gly Met			
675	680	685		
Lys Ser Pro Pro Asp Gln	Pro Val Lys His Leu Phe Thr Thr Gly Val			
690	695	700		
Val Tyr Asp Thr Phe Met	Leu Lys His Gln Cys Met Cys Gly Asn Thr			
705	710	715	720	
His Val His Pro Glu His	Ala Gly Arg Ile Gln Ser Ile Trp Ser Arg			
725	730	735		
Leu Gln Glu Thr Gly Leu	Leu Ser Lys Cys Glu Arg Ile Arg Gly Arg			
740	745	750		
Lys Ala Thr Leu Asp Glu	Ile Gln Thr Val His Ser Glu Tyr His Thr			
755	760	765		
Leu Leu Tyr Gly Thr Ser	Pro Leu Asn Arg Gln Lys Leu Asp Ser Lys			
770	775	780		
Lys Leu Leu Gly Pro Ile	Ser Gln Lys Met Tyr Ala Val Leu Pro Cys			
785	790	795	800	
Gly Gly Ile Gly Val Asp	Ser Asp Thr Val Trp Asn Glu Met His Ser			
805	810	815		
Ser Ser Ala Val Arg Met	Ala Val Gly Cys Leu Leu Glu Leu Ala Phe			
820	825	830		
Lys Val Ala Ala Gly Glu	Leu Lys Asn Gly Phe Ala Ile Ile Arg Pro			
835	840	845		
Pro Gly His His Ala Glu	Glu Ser Thr Ala Met Gly Phe Cys Phe Phe			
850	855	860		
Asn Ser Val Ala Ile Thr	Ala Lys Leu Leu Gln Gln Lys Leu Asn Val			
865	870	875	880	
Gly Lys Val Leu Ile Val	Asp Trp Asp Ile His His Gly Asn Gly Thr			

```
<210> 5545
<211> 1932
<212> DNA
<213> Homo sapiens
```

```
<400> 5545
nncccagttt ctcagtgtcc ctgagcctca gttttctcat ctataaataa gaatcgcttg
60
aacctgggag gcggaggttg cgctaaccaa gatcgcgcca ttgcactcca gcctgggtga
120
caggagtga aactctgtatc aaaaagaaat aaaaaaacga ggtcaagtag taagagaagc
180
ggtaagagtg acgggaacag gagtcattga cctcttggga gaggagacat tggaggtggg
240
gatgatttgc tgaagcagcc acacacgttc agcttgtgag gacagcagtt gttaggcagg
300
ggatgagggg ggaagctggc agatctgtgc aggtgagagg tacctgtggc cttgggctca
360
tggaagtggg aggtgatggg attctaattgt gcttgggtac agtttacaaa tacaacctct
420
```



cttagtttgc ccaatacctc caaattcctg ggggtggcaca cctgaggttc aggtggcatg  
480  
actgagccac agtcacacat cccactgta ggataccacc acggttgggt taggttccag  
540  
cacatggcgg tcccggcctg gcctcttggg cccacctcac ctggtgacta gtgcagacca  
600  
ctctgttctt gcctgtttca ggcagcggag gaggagaaag agatggacct cccggactcg  
660  
gcctcgaggg tcttctgcgg ccgcctcctg agcatggtga acacagatga tgtcaacgcc  
720  
atcatcctgg ccagaagaa catgctggac cgctttgaga agaccaatga gatgctgctc  
780  
aacttcaaca acctgtccag tgcccgctg cagcagatga gcgaacgctt cctgcaccac  
840  
acgaggacc tagtagagat gaaacgggac ctggacagca tcttcgccc tatcaggacg  
900  
ctgaaagga aactggccag gcagcaccca gaggccttca gccatatccc agaggcatcc  
960  
ttcctggagg aagaggatga agacccatc ccaccagca ccacgaccac cattgccacc  
1020  
tcagaacaga gcacgggctc atgtgacacc agcccgaca ccgtctcgcc ctccctgagc  
1080  
cccggcttcg aggacctgc ccatgtccag cctggctccc cagccatcaa cggccgcagc  
1140  
cagacagatg acgaggagat gacgggcaa tagccctgct gcccggtgcc ttgagggggt  
1200  
ctcagggcag cagcatataa ggtggcagcg ggtaaccctg ccttgttctg tcatccaggg  
1260  
ctcctttgct gcccgttct gtcaccagc gctcctaggg ggacaaggct ctctcccgag  
1320  
gggtgtggaa ttcctggggg ggtctttaat tctggctcct tccttctca gaacatctct  
1380  
attctgcaag acccctctgc catgccaggg cagcccatc ccagctggag tctgggggt  
1440  
gggcacaggg gaatttttcc agagctgagc ctgacgtctg ctctgaagaa tgcttagaag  
1500  
gttcccagac accagagcca gatgtcccc accaccggtc aggacctcct tgaggtgcac  
1560  
aagcacggtc tcctctgagt tcacccagc ccaccccgcc accactaat tctgcttttc  
1620  
ctgccccttg ctccgtaaaa gtatcaaata ctttctcctt ggtatctcaa ggaggtttct  
1680  
gagataggta gaagtcttga gacggaggct ggccatccat tcagccctga gcgtgctgag  
1740  
ttctgtgttt ctctgaatag aggtgtggaa cctgaggggc cagcaggcct ctctgaaggc  
1800  
ctccatggag caaacggagc cacctcggga aagagtttaa tggaatattt ttgtaccga  
1860  
tgtttacaga tgctgttggg aagttatcaa taaaagaca ccattactaa aaaggga  
1920  
gtaaaaaaaa aa  
1932

&lt;210&gt; 5546

<211> 183  
<212> PRT  
<213> Homo sapiens

<400> 5546  
Ala Ala Glu Glu Glu Lys Glu Met Asp Leu Pro Asp Ser Ala Ser Arg  
1 5 10 15  
Val Phe Cys Gly Arg Ile Leu Ser Met Val Asn Thr Asp Asp Val Asn  
20 25 30  
Ala Ile Ile Leu Ala Gln Lys Asn Met Leu Asp Arg Phe Glu Lys Thr  
35 40 45  
Asn Glu Met Leu Leu Asn Phe Asn Asn Leu Ser Ser Ala Arg Leu Gln  
50 55 60  
Gln Met Ser Glu Arg Phe Leu His His Thr Arg Thr Leu Val Glu Met  
65 70 75 80  
Lys Arg Asp Leu Asp Ser Ile Phe Arg Arg Ile Arg Thr Leu Lys Gly  
85 90 95  
Lys Leu Ala Arg Gln His Pro Glu Ala Phe Ser His Ile Pro Glu Ala  
100 105 110  
Ser Phe Leu Glu Glu Glu Asp Glu Asp Pro Ile Pro Pro Ser Thr Thr  
115 120 125  
Thr Thr Ile Ala Thr Ser Glu Gln Ser Thr Gly Ser Cys Asp Thr Ser  
130 135 140  
Pro Asp Thr Val Ser Pro Ser Leu Ser Pro Gly Phe Glu Asp Leu Ser  
145 150 155 160  
His Val Gln Pro Gly Ser Pro Ala Ile Asn Gly Arg Ser Gln Thr Asp  
165 170 175  
Asp Glu Glu Met Thr Gly Glu  
180

<210> 5547  
<211> 1391  
<212> DNA  
<213> Homo sapiens

<400> 5547  
nntgtcctac ggcggacagt ttcgtaccgg cttcttctct ggggtagggg tagcctcgcc  
60  
cggaagcaag gcctctggaa aaccgcggcc cctgagttgc aaacaaatgt cagatcccag  
120  
atattaaggc taagacatac tgcatttgta ataccaaaga aaaacgttcc tacctcaaaa  
180  
cgtgaaactt acacagagga ttttattaaa aagcagattg aagagttcaa cataggaaag  
240  
agacatttag ccaacatgat gggagaagat ccagaaactt tcaactcaaga agatattgac  
300  
agagctattg cttacctttt cccaagtggg ttgtttgaga aacgagccag gccagtaatg  
360  
aagcatcctg aacagatttt tccaagacaa agagcaatcc agtggggaga agatggccgt  
420  
ccatttcact atctcttcta tactggcaaa cagtcatact attcattaat gcatgatgta  
480  
nntatggaat gttactcaat ttagaaanaa catcaaagtc acttgcaagc caaaagtctg  
540

cttccagaaa aaactgtaac cagagacgtg attggcagca gatggctgat taaggaggaa  
 600  
 ctagaagaaa tgtagtgga aaaactgtca gatctagatt atatgcagtt cattcggctg  
 660  
 ctagaaaagt tattgacatc gcagtgtggt gctgctgagg aagaatttgt gcagagggtt  
 720  
 cgaagaagtg taactcttga atcaaaaaaa cagctgattg aacctgtaca gtatgatgag  
 780  
 caaggaatgg ccttttagcaa aagcgaagggt aaaagaaaaga ctgcaaaagc agaagcaatt  
 840  
 gtttataaac atggaagtgg aagaataaaa gtaaatggaa ttgattacca gctttacttc  
 900  
 ccgatcacac aggacagaga acagctgatg ttccctttcc actttgttga ccggctggga  
 960  
 aagcagcagc tgacctgcac agtctcaggg ggccggagggt cagcgcaggc tggagcaata  
 1020  
 cgactggcaa tggcaaaagc cttgtgcagc ttgtgcaccg aggacgagggt cgagtggatg  
 1080  
 agacaagctg gactacttac tactgatcca cgtgtgaggg aacggaagaa gccaggccaa  
 1140  
 gagggagccc gcagaaagtt tacgtggaag aaacgctaag ggtttgctcc caggaaagga  
 1200  
 gaggaagagc tatatatatg tgccgacatg tggcagacac acagtaaata atggctgacc  
 1260  
 agcatgaggg cagtactgtc agaaatttct ttgagctgtg agatggattt atttttaaat  
 1320  
 gctactttgt aaaggtgacc tttaaaaaat aaaaggaaaa taaagaatgt tagtttcaaa  
 1380  
 aaaaaaaaaa a  
 1391

&lt;210&gt; 5548

&lt;211&gt; 167

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5548

Xaa	Val	Leu	Arg	Arg	Thr	Val	Ser	Tyr	Arg	Leu	Leu	Leu	Trp	Gly	Arg
1				5					10					15	
Gly	Ser	Leu	Ala	Arg	Lys	Gln	Gly	Leu	Trp	Lys	Thr	Ala	Ala	Pro	Glu
		20					25					30			
Leu	Gln	Thr	Asn	Val	Arg	Ser	Gln	Ile	Leu	Arg	Leu	Arg	His	Thr	Ala
		35					40				45				
Phe	Val	Ile	Pro	Lys	Lys	Asn	Val	Pro	Thr	Ser	Lys	Arg	Glu	Thr	Tyr
	50					55					60				
Thr	Glu	Asp	Phe	Ile	Lys	Lys	Gln	Ile	Glu	Glu	Phe	Asn	Ile	Gly	Lys
65					70				75					80	
Arg	His	Leu	Ala	Asn	Met	Met	Gly	Glu	Asp	Pro	Glu	Thr	Phe	Thr	Gln
				85				90					95		
Glu	Asp	Ile	Asp	Arg	Ala	Ile	Ala	Tyr	Leu	Phe	Pro	Ser	Gly	Leu	Phe
			100				105						110		
Glu	Lys	Arg	Ala	Arg	Pro	Val	Met	Lys	His	Pro	Glu	Gln	Ile	Phe	Pro
		115				120					125				
Arg	Gln	Arg	Ala	Ile	Gln	Trp	Gly	Glu	Asp	Gly	Arg	Pro	Phe	His	Tyr

130	135	140
Leu Phe Tyr Thr Gly Lys Gln Ser Tyr Tyr Ser	Leu Met His Asp Val	
145	150	155
Xaa Met Glu Cys Tyr Ser Ile		160
165		

<210> 5549  
 <211> 1865  
 <212> DNA  
 <213> Homo sapiens

<400> 5549  
 gcgtcaccga gggccgcgca gactgcgacg gatacaggga gggcaagggt ttccttttgg  
 60  
 cgcttccctt tggaccccg agtgaaaaac tctaactgcc agatcagtgg agagaaacgc  
 120  
 agatttagga ccctgaggag tctttttcac ccgtttcccg tctctcgctc aggcgcgccc  
 180  
 agggcagtc ttgtggggtc ctctgggcca gccaaagtgg ttgccccgc agtgaagggt  
 240  
 gcccgaggat ggtcgggcct ggctgtgggc gtgcggcggg ctgtcttgca gcttccaggg  
 300  
 ctaactcagg tgagatggag ccgctatagt cctgaattca aggatccctt gattgacaag  
 360  
 gaatattatc gcaagccagt ggaggagcta actgaggagg agaaatatgt tcgggagctc  
 420  
 aagaagactc agctcatcaa agctgtcca gcagggaaca caagtctgt gtttgaagac  
 480  
 ccagtcatca gtaaattcac caacatgat atgataggag gaaacaaagt actggccaga  
 540  
 tccctcatga ttcagactct ggaagctgtg aaaaggaagc agtttgagaa gtacctgcc  
 600  
 gcttctgcag aggaacaggc aaccatcga cgcaaccctt acaccatctt ccatcaagca  
 660  
 ctgaaaaact gtgagcctat gattgggctg gtacccatcc tcaaggagg ccgtttctac  
 720  
 caggctccctg taccctacc cgaccggcgt cgccgcttcc tagccatgaa gtggatgatc  
 780  
 actgagtgcc gggataaaaa gcaccagcgg acactgatgc cggagaagct gtcacacaag  
 840  
 ctgctggagg ctttccataa ccaggggccc gtgatcaaga ggaagcatga cttgcacaag  
 900  
 atggcagagg ccaaccgtgc cctggcccac taccgctggt ggtagagtct ccaggaggag  
 960  
 cccaggggcc tctgccgcaa gaaacagtgt gagctactgc cacgctgaaa actacctgtg  
 1020  
 ggttaaggat gtagttcctt tgtaagggtg ggcaggcctc gtaagaaaga ttagcagca  
 1080  
 tattcactat ccgttaatcc ttctttcttt gaggtggaa cttgctctct ctgcccctat  
 1140  
 ttccttgtaa agaggagca cattgacttg ggaatttctt ccaggaaact cagggtgtt  
 1200  
 ttctctccc ttaggttggg gcggacctt ggacatataa aggaagcagt ttagtatca  
 1260

gaaaagattt attagaaaat tctcacgctg aactgggtga gcatgtggtg cagcattcag  
 1320  
 tgaaactggc tggaggaaat aggcttggtt ccagagttgt ccttatacaa aatgtataaa  
 1380  
 aagcagtttc tgggtgtgact tgtgctctgc ctccaccctt tgacatccca aaatatccca  
 1440  
 ccagtggcta tgcttaccca ttttacagat gggtaaactg aggcaccaag gtagtagttg  
 1500  
 cactaatggt tacacagtgc agtggctctt gggagttgcc cttctctgcc tggcctggtt  
 1560  
 gggttgtggt ggggaaagg gctcagggca ggaccacggc ataagtggga aacatctcac  
 1620  
 caggagatgg gaaagtctag aaggggaagac actcaaagtc tggaagggaa aagtctttgg  
 1680  
 gtgaggcaga gactccactg ccagcttttag aggtgggtag aagaaaggcc agtgctggtg  
 1740  
 aggaagccct gatctggagg cctagtcgga gacttcgctg tagtaatact tgtgggcagc  
 1800  
 tggcgttgct ttccagccgg ccgcccggaa ctcaatgatc tccagcagca gcagctggca  
 1860  
 gggcc  
 1865

<210> 5550

<211> 242

<212> PRT

<213> Homo sapiens

<400> 5550

Met	Val	Ala	Pro	Ala	Val	Lys	Val	Ala	Arg	Gly	Trp	Ser	Gly	Leu	Ala
1				5					10					15	
Leu	Gly	Val	Arg	Ala	Val	Leu	Gln	Leu	Pro	Gly	Leu	Thr	Gln	Val	
			20				25						30		
Arg	Trp	Ser	Arg	Tyr	Ser	Pro	Glu	Phe	Lys	Asp	Pro	Leu	Ile	Asp	Lys
		35					40					45			
Glu	Tyr	Tyr	Arg	Lys	Pro	Val	Glu	Glu	Leu	Thr	Glu	Glu	Glu	Lys	Tyr
	50					55				60					
Val	Arg	Glu	Leu	Lys	Lys	Thr	Gln	Leu	Ile	Lys	Ala	Ala	Pro	Ala	Gly
65					70					75				80	
Lys	Thr	Ser	Ser	Val	Phe	Glu	Asp	Pro	Val	Ile	Ser	Lys	Phe	Thr	Asn
			85						90					95	
Met	Met	Met	Ile	Gly	Gly	Asn	Lys	Val	Leu	Ala	Arg	Ser	Leu	Met	Ile
			100					105					110		
Gln	Thr	Leu	Glu	Ala	Val	Lys	Arg	Lys	Gln	Phe	Glu	Lys	Tyr	His	Ala
		115					120					125			
Ala	Ser	Ala	Glu	Glu	Gln	Ala	Thr	Ile	Glu	Arg	Asn	Pro	Tyr	Thr	Ile
		130				135					140				
Phe	His	Gln	Ala	Leu	Lys	Asn	Cys	Glu	Pro	Met	Ile	Gly	Leu	Val	Pro
145					150					155				160	
Ile	Leu	Lys	Gly	Gly	Arg	Phe	Tyr	Gln	Val	Pro	Val	Pro	Leu	Pro	Asp
			165					170					175		
Arg	Arg	Arg	Arg	Phe	Leu	Ala	Met	Lys	Trp	Met	Ile	Thr	Glu	Cys	Arg
			180					185					190		
Asp	Lys	Lys	His	Gln	Arg	Thr	Leu	Met	Pro	Glu	Lys	Leu	Ser	His	Lys

	195		200		205										
Leu	Leu	Glu	Ala	Phe	His	Asn	Gln	Gly	Pro	Val	Ile	Lys	Arg	Lys	His
	210					215					220				
Asp	Leu	His	Lys	Met	Ala	Glu	Ala	Asn	Arg	Ala	Leu	Ala	His	Tyr	Arg
225					230					235					240
Trp	Trp														

<210> 5551  
 <211> 1689  
 <212> DNA  
 <213> Homo sapiens

<400> 5551  
 ttttaaatta cattatattat ttttttagatc atccctctta gtcctgcatg cattgttagc  
 60  
 acaaaaagtt gaacttgatc acaacttcct ttgaagagag agtaggtaca caatgaccat  
 120  
 ctgaagagtt tctccacgga gggaccaaga attccagacg ctggtaacac tgtcagtaac  
 180  
 ctacacaact ttcaatacaa aaaaatttac caaatatcct gtttaatgta aacaaggcag  
 240  
 gaggcaaac agagtattac agtaacacta ttttacaggg cccagaaaat gtgattatct  
 300  
 accatgtttt aacacataaa gtgtcacaat gacatgcata tttgatttac tacataacc  
 360  
 aaaatataat taccatatag tgtggtttta gcacttcact gtaacgtctt ctgtcaatac  
 420  
 tgatggactt cataattaaa tggcaattgt atgttaatgc aataatttat gaaaacatta  
 480  
 ccatgaattt atgaagtaat tccataattt gtgccttgta aaattaagtg taacaatggt  
 540  
 tacactagca acagtgtgag cgagctaaga attttggtcc ttatatatat acatatatac  
 600  
 atatatacac acacaataat gtacaattaa accaaaaagc tatgaatcca ctcacagctt  
 660  
 ccatattgca caaacagata cattacgaga aagttacata gttataagggt gagtactata  
 720  
 tggcaatagg ctaagacaaa tctgagttct atcaagtaaa gaatgcggct cataactaaa  
 780  
 aacaaatcca aagactatat tgtagaaag ttttaaaaaa tgtgcatatt tattgataca  
 840  
 aatgtgaagc aaggctgaaa ttcactttgg aacttgctat ggcaatcaat tgttatgacg  
 900  
 gtgctttcca ctcagcatag tgcatttttag ttactgtttt tgcaagtact gagtaacaga  
 960  
 aatattcagc tgtcaacaga aggtaagaaa aactgggtgat gcagtacaat gtttcactaa  
 1020  
 caaattgaac tcaactgtgag agcttctact ggctctaggt ctgaaatagg gccttcaggt  
 1080  
 tccaaaccaa gtaaccgctt tctgactaac agaagcttgg gagtaaagtc ttgaatacgc  
 1140  
 tggattcgaa gcataaggtc tccaacaacc ctgacaatta cagagaagag agatctacag  
 1200

ccaggagcga ggttcacgta aggatccaaa aggtactcgt ggatgtgtgg atgaggggaag  
1260  
agagaaagtc tagataacac tgagggttact tgtaagtta catcatatgg ctgatcaaga  
1320  
attcttccca ttctgtcgaa cagcactttc aaaaaatgac cttcaaagaa agcagcttct  
1380  
aaattgcact tttccaatgc ttttggagac ccaggccact cccatcttaa gcagatagca  
1440  
cagtagtctc ggaactgcct atgagcgtct cggaggtaag tgtcatatcc tgtgccctca  
1500  
acatggtagg aggattttgc gtcacccggg accagacaga gaaaactatt tacaatttta  
1560  
tgaacttcag tttttccatc atttttgggg tggctctggag tagcaggagg tgaagaacta  
1620  
agccactctt ggtttggcaa agtgttttct ggtgaaatgt cagtaaataa tggatcttct  
1680  
tccagatct  
1689

<210> 5552

<211> 104

<212> PRT

<213> Homo sapiens

<400> 5552

Met	Gly	Arg	Ile	Leu	Asp	Gln	Pro	Tyr	Asp	Val	Asn	Leu	Gln	Val	Thr
1				5					10					15	
Ser	Val	Leu	Ser	Arg	Leu	Ser	Leu	Phe	Pro	His	Pro	His	Ile	His	Glu
			20					25					30		
Tyr	Leu	Leu	Asp	Pro	Tyr	Val	Asn	Leu	Ala	Pro	Gly	Cys	Arg	Ser	Leu
			35				40					45			
Phe	Ser	Val	Ile	Val	Arg	Val	Val	Gly	Asp	Leu	Met	Leu	Arg	Ile	Gln
			50				55				60				
Arg	Ile	Gln	Asp	Phe	Thr	Pro	Lys	Leu	Leu	Leu	Val	Arg	Lys	Arg	Leu
65					70					75				80	
Leu	Gly	Leu	Glu	Pro	Glu	Gly	Pro	Ile	Ser	Asp	Leu	Glu	Pro	Val	Glu
			85						90					95	
Ala	Leu	Thr	Val	Ser	Ser	Ile	Cys								
							100								

<210> 5553

<211> 274

<212> DNA

<213> Homo sapiens

<400> 5553

ccatggatgg aggccagggt acttcaggac ctctgaagac agcaaagcag tttctggcaa  
60  
tctctgagga ggtggcattt gttccagaaa aaaggacccc ccaaccccat cccacagcct  
120  
caccagaccc taaagtcaga ataaccggcc cagctacagc ccctgcggtc gtgcttagcc  
180  
actacagagg ctgctatttc cccagccagt gtccttggca gccttggaaa ccaatgaagc  
240

aggctctgac acaggaatcc ctctgcatct ttat  
274

<210> 5554  
<211> 90  
<212> PRT  
<213> Homo sapiens

<400> 5554  
Met Asp Gly Gly Gln Gly Thr Ser Gly Pro Leu Lys Thr Ala Lys Gln  
1 5 10 15  
Phe Leu Ala Ile Ser Glu Glu Val Ala Phe Val Pro Glu Lys Arg Thr  
20 25 30  
Pro Gln Pro His Pro Thr Ala Ser Pro Asp Pro Lys Val Arg Ile Thr  
35 40 45  
Gly Pro Ala Thr Ala Pro Ala Val Val Leu Ser His Tyr Arg Gly Cys  
50 55 60  
Tyr Phe Pro Ser Gln Cys Pro Trp Gln Pro Trp Lys Pro Met Lys Gln  
65 70 75 80  
Ala Leu Thr Gln Glu Ser Leu Cys Ile Phe  
85 90

<210> 5555  
<211> 414  
<212> DNA  
<213> Homo sapiens

<400> 5555  
acgcgtgtgt gcacgcaggc atgggctttc agggctttca gagcaggggc cgacggcatt  
60  
ctccctcggg ccagcgggtca gatgtggggg tcaggaaaca aggccaggt ggggatgaat  
120  
cacagggtg tgattctaga agggacagct gtgagggggc gggacaggct aagctggagg  
180  
actcaccaga cttgcggggg tcaacacgct ccagatgtct cctagacctc tcacactcag  
240  
cacatccaaa cctgaacca gcacctggcc ccacacctgt cccctggcta gagacggggg  
300  
cctcagccca gctgttcccc ttctcccaca gcctctcagc tgcgtgtcgg gtccattctg  
360  
catcttgaac atctctccca gtggattccc ttctgctgtc ctggtccagg atcc  
414

<210> 5556  
<211> 115  
<212> PRT  
<213> Homo sapiens

<400> 5556  
Met Gly Phe Gln Gly Phe Gln Ser Arg Gly Arg Arg His Ser Pro Ser  
1 5 10 15  
Gly Gln Arg Ser Asp Val Gly Phe Arg Lys Gln Gly Pro Gly Gly Asp  
20 25 30  
Glu Ser Gln Gly Cys Asp Ser Arg Arg Asp Ser Cys Glu Gly Pro Gly



35 40 45  
Gln Ala Lys Leu Glu Asp Ser Pro Asp Leu Arg Gly Ser Thr Arg Ser  
50 55 60  
Arg Cys Leu Leu Asp Leu Ser His Ser Ala His Pro Asn Leu Asn Pro  
65 70 75 80  
Ala Pro Gly Pro Thr Pro Val Pro Trp Leu Glu Thr Gly Ala Ser Ala  
85 90 95  
Gln Leu Phe Pro Phe Ser His Ser Leu Ser Ala Ala Cys Arg Val His  
100 105 110  
Ser Ala Ser  
115

&lt;210&gt; 5557

&lt;211&gt; 1970

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5557

nnccgaggct gggccaaggc ccgcgatggt gatctgctgt gcggccgtga actgctccaa  
60  
ccggcagggg aagggcgaga agcgcgccgt ctcttccac aggttcccc taaaggactc  
120  
aaaacgtcta atccaatggt taaaagctgt tcagagggat aactggactc ccactaagta  
180  
ttcatttctc tgtagtgagc atttcaccaa agacagcttc tccaagaggc tggaggacca  
240  
gcatcgctg ctgaagccca cggccgtgcc atccatcttc cacctgaccg agaagaagag  
300  
gggggctgga ggccatggcc gcaccggag aaaagatgcc agcaaggga cagggggtgt  
360  
gaggggacac tcgagtgccg ccaccgcgag aggagctgca ggttggtcac cgtcctcgag  
420  
tggaataccg atggccaagc cagagtcccg caggttgaag caagctgctc tgcaagggtga  
480  
agccacaccc agggcgccc aggagcaggt ccgaaggagc agggccagca agctcctgga  
540  
acggactcca ggagatggac tggccaccat ggtcgaggca gtcaggaaa agcagaagcg  
600  
tctgccacag atgctggcga tgagagcgcc acttctcca tcgaagggg cgtgacagat  
660  
aagagtggca tttctatgga tgactttacg cccccaggat ctggggcgtg caaatttatc  
720  
ggctcacttc attcgtacag tttctctcc aagcacaccc gagaaaggcc atctgtcccc  
780  
cgagagccca ttgaccgcaa gaggctgaag aaagatgtgg aaccaagctg cagtgggagc  
840  
agcctgggac ccgacaaggg cctggcccag agccctccca gctcatcact taccgcgaca  
900  
cggcagaagc cttcccagag cccctctgcc cctcctgcc acgtcacccc aaagccagcc  
960  
acggaagccg tgcagagcga gcacagcgac gccagcccca tgtccatcaa cgaggatc  
1020  
ctgtcggcgt caggggcctg caagctcatc gactcactgc actcctactg cttctcctcc  
1080

cggcagaaca agagccaggt gtgctgctg cgggagcagg tggagaagaa gaacggcgag  
1140  
ctgaagagcc tgcggcagag ggtcagccgc tccgacagcc aggtgcggaa gctacaggag  
1200  
aagctggatg agctgaggag agtgagcgtc ccctatccaa gtagcctgct gtcgcccagc  
1260  
cgcgagcccc ccaagatgaa cccagtgggtg gagccactgt cctggatgct gggcacctgg  
1320  
ctgtcggacc cacctggagc cgggacctac cccacactgc agcccttcca gtacctggag  
1380  
gaggttcaca tctcccacgt gggccagccc atgctgaact tctcgttcaa ctccttccac  
1440  
ccggacacgc gcaagccgat gcacagagag tgtggcttca ttcgcctcaa gcccagacacc  
1500  
aacaaggtgg cctttgtcag cgcccagaac acaggcgtgg tggaaagtga ggagggcgag  
1560  
gtgaacgggc aggagctgtg catcgcatcc cactccatcg ccaggatctc cttcgccaag  
1620  
gagccccacg tagagcagat cacccggaag ttcaggctga attctgaagg caaacttgag  
1680  
cagacgggtct ccatggcaac cacgacacag ccaatgactc agcatcttca cgtcacctac  
1740  
aagaaggtga ccccgtaaac ctagagcttc tggagccctc gggagggcct ggctactgtg  
1800  
cctcaacggt tcggctcctc aacagacagt ccctgcggca gaagtgggtg tggccgtgag  
1860  
cctctgcagg ctcaagagtg ttgtccagat gtttctgtac tggcatagaa aaaccaaata  
1920  
aaaggccttt attttttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
1970

&lt;210&gt; 5558

&lt;211&gt; 360

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5558

Met	Asp	Asp	Phe	Thr	Pro	Pro	Gly	Ser	Gly	Ala	Cys	Lys	Phe	Ile	Gly
1				5					10					15	
Ser	Leu	His	Ser	Tyr	Ser	Phe	Ser	Ser	Lys	His	Thr	Arg	Glu	Arg	Pro
			20					25					30		
Ser	Val	Pro	Arg	Glu	Pro	Ile	Asp	Arg	Lys	Arg	Leu	Lys	Lys	Asp	Val
		35					40					45			
Glu	Pro	Ser	Cys	Ser	Gly	Ser	Ser	Leu	Gly	Pro	Asp	Lys	Gly	Leu	Ala
	50					55					60				
Gln	Ser	Pro	Pro	Ser	Ser	Ser	Leu	Thr	Ala	Thr	Arg	Gln	Lys	Pro	Ser
65					70					75				80	
Gln	Ser	Pro	Ser	Ala	Pro	Pro	Ala	Asp	Val	Thr	Pro	Lys	Pro	Ala	Thr
			85					90						95	
Glu	Ala	Val	Gln	Ser	Glu	His	Ser	Asp	Ala	Ser	Pro	Met	Ser	Ile	Asn
		100						105					110		
Glu	Val	Ile	Leu	Ser	Ala	Ser	Gly	Ala	Cys	Lys	Leu	Ile	Asp	Ser	Leu
	115						120					125			
His	Ser	Tyr	Cys	Phe	Ser	Ser	Arg	Gln	Asn	Lys	Ser	Gln	Val	Cys	Cys

130		135		140
Leu Arg Glu Gln Val	Glu Lys Lys Asn Gly Glu	Leu Lys Ser Leu Arg		
145	150	155	160	
Gln Arg Val Ser Arg	Ser Asp Ser Gln Val Arg	Lys Leu Gln Glu Lys		
	165	170	175	
Leu Asp Glu Leu Arg	Arg Val Ser Val Pro Tyr	Pro Ser Ser Leu Leu		
	180	185	190	
Ser Pro Ser Arg Glu	Pro Pro Lys Met Asn Pro	Val Val Glu Pro Leu		
	195	200	205	
Ser Trp Met Leu Gly	Thr Trp Leu Ser Asp Pro	Pro Gly Ala Gly Thr		
	210	215	220	
Tyr Pro Thr Leu Gln	Pro Phe Gln Tyr Leu Glu	Glu Val His Ile Ser		
225	230	235	240	
His Val Gly Gln Pro	Met Leu Asn Phe Ser Phe	Asn Ser Phe His Pro		
	245	250	255	
Asp Thr Arg Lys Pro	Met His Arg Glu Cys Gly	Phe Ile Arg Leu Lys		
	260	265	270	
Pro Asp Thr Asn Lys	Val Ala Phe Val Ser Ala	Gln Asn Thr Gly Val		
	275	280	285	
Val Glu Val Glu Glu	Gly Glu Val Asn Gly Gln	Glu Leu Cys Ile Ala		
	290	295	300	
Ser His Ser Ile Ala	Arg Ile Ser Phe Ala Lys	Glu Pro His Val Glu		
305	310	315	320	
Gln Ile Thr Arg Lys	Phe Arg Leu Asn Ser Glu	Gly Lys Leu Glu Gln		
	325	330	335	
Thr Val Ser Met Ala	Thr Thr Thr Gln Pro	Met Thr Gln His Leu His		
	340	345	350	
Val Thr Tyr Lys Lys	Val Thr Pro			
	355	360		

&lt;210&gt; 5559

&lt;211&gt; 3866

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5559

```

nnaattcgag gatccgggta ccatggcaca gagcgacaga gacatttatt gttatttggt
60
ttttggtggc aaaaaggga aatggcgaac gactccctg caaaaagtct ggtggacatc
120
gacctctcct ccctgcggga tctgtctggg atttttgagc tggtggaagt ggttggaat
180
ggcacctatg gacaagtcta taagggtcga catgttaaaa cgggtcagtt ggcagccatc
240
aaagttatgg atgtcactga ggatgaagag gaagaaatca aactggagat aaatatgcta
300
aagaaatact ctcatcacag aaacattgca acatattatg gtgctttcat caaaaagagc
360
cctccaggac atgatgacca actctggctt gttatggagt tctgtggggc tgggtccatt
420
acagaccttg tgaagaacac caaagggaac aactcaaag aagactggat cgcttacatc
480
tccagagaaa tctgagggg actggcacat cttcacattc atcatgtgat tcaccgggat
540

```

atcaagggcc agaatgtgtt gctgactgag aatgcagagg tgaaacttgt tgacttttgt  
600  
gtgagtgtc agctggacag gactgtgggg cggagaaata cgttcataagg cactccctac  
660  
tggatggctc ctgagggtcat cgcctgtgat gagaaccag atgccaccta tgattacaga  
720  
agtgatcttt ggtcttgtgg cattacagcc attgagatgg cagaagggtgc tccccctctc  
780  
tgtgacatgc atccaatgag agcactgttt ctcatccca gaaaccctcc tccccggctc  
840  
aagtccaaga agtggtcgaa gaagtgcatt gacttcattg acacatgtct catcaagact  
900  
tacatgcagc ggcccaccac ggagcagctt ttgaagtttc cttttataag ggatcagccc  
960  
acggagcggc aggtccgcat ccagcttaag gatcatatag atcgtaccag gaagaagcgg  
1020  
ggtgagaaa aggagacaga atatgagtac agcggcagcg aggaggaaga tgacagccat  
1080  
ggagaggaag gagagccaag ttccatcatg aacgtgcctg gagagtctac tcttcgccga  
1140  
gatttcctga gactgcagca ggagaacaag gaacgttccg aggtctctcg gagacaacag  
1200  
ttactacagg agcaacagct ccgggagcag gaagaatata aaaggcaact gctggcagag  
1260  
agacagaagc ggattgagca gcagaaagaa cagaggcgac ggctagaaga gcaacaaagg  
1320  
agagagcggg aggctagaag gcagcaggaa cgtgaacagc gaaggagaga acaagaagaa  
1380  
aagaggcgtc tagaggagtt ggagagaagg cgcaaagaag aagaggagag gagacgggca  
1440  
gaagaagaaa agaggagagt tgaaagagaa caggagtata tcaggcgaca gctagaagag  
1500  
gagcagcggc acttggaagt ccttcagcag cagctgctcc aggagcaggc catgttactg  
1560  
catgaccata ggaggccgca cccgcagcac tcgcagcagc cgccaccacc gcagcaggaa  
1620  
aggagcaagc caagcttcca tgctcccag cccaaagccc actacgagcc tgctgaccga  
1680  
gcgcgagagg ttctgtgag aacaacatct cgctcccctg ttctgtcccg tcgagattcc  
1740  
ccactgcagg gcagtgggca gcagaatagc caggcaggac agagaaactc caccagcagt  
1800  
attgagccca ggcttctgtg ggagagagtg gagaagctgg tgcccagacc tggcagtggc  
1860  
agctcctcag ggtccagcaa ctgaggatcc cagcccgggt ctaccctgg gtctcagagt  
1920  
ggctccgggg aacgcttcag agtgagatca tcatccaagt ctgaaggctc tccatctcag  
1980  
cgcttgaaa atgcagtga aaaacctgaa gataaaaagg aagttttcag acccctcaag  
2040  
cctgctggcg aagtggatct gaccgcactg gccaaagagc ttcgagcagt ggaagatgta  
2100  
cggccacctc acaaagtaac ggactactcc tcatccagtg aggagtcggg gacgacggat  
2160

gaggaggacg acgatgtgga gcaggaaggg gctgacgagt ccacctcagg accagaggac  
2220  
accagagcag cgtcatctct gaatttgagc aatggtgaaa cggaatctgt gaaaaccatg  
2280  
attgtccatg atgatgtaga aagtgagccg gccatgaccc catccaagga gggcactcta  
2340  
atcgccgccc agactcagtc cgctagtagc acactccaga aacacaaatc ttctcctcc  
2400  
tttacacctt ttatagaccc cagattacta cagatttctc catctagcgg aacaacagtg  
2460  
acatctgtgg tgggattttc ctgtgatggg atgagaccag aagccataag gcaagatcct  
2520  
acccggaag gctcagtggc caatgtgaat cctaccaaca ctaggccaca gagtgcaccc  
2580  
ccggagattc gtaaatacaa gaagaggttt aactctgaga ttctgtgtgc tgccttatgg  
2640  
ggagtgaatt tgctagtggg tacagagagt ggcctgatgc tgctggacag aagtggccaa  
2700  
gggaaggtct atcctcttat caaccgaaga cgatttcaac aaatggacgt acttgagggc  
2760  
ttgaatgtct tggtgacaat atctggcaaa aaggataagt tacgtgtcta ctatttgtcc  
2820  
tggttaagaa ataaaatact tcacaatgat ccagaagttg agaagaagca gggatggaca  
2880  
accgtagggg atttgggaagg atgtgtacat tataaagttg taaaatatga aagaatcaaa  
2940  
tttctgggtga ttgctttgaa gagttctgtg gaagtctatg cgtgggcacc aaagccatat  
3000  
cacaatttta tggcctttta gtcatttga gaatttgtac ataagccatt actggtggat  
3060  
ctcactgttg aggaaggcca gaggttgaaa gtgatctatg gatcctgtgc tggattccat  
3120  
gctgttgatg tggattcagg atcagtctat gacatttatc taccaacaca tgtaagaaag  
3180  
aaccacact ctatgatcca gtgtagcatc aaaccccatg caatcatcat cctccccaat  
3240  
acagatggaa tggagcttct ggtgtgctat gaagatgagg gggtttatgt aaacacatat  
3300  
ggaaggatca ccaaggatgt agttctacag tggggagaga tgcctacatc agtagcatat  
3360  
attcgatcca atcagacaat gggctgggga gagaaggcca tagagatccg atctgtggaa  
3420  
actggtcact tggatggtgt gttcatgcac aaaagggtc aaagactaaa attcttgtgt  
3480  
gaacgcaatg acaaggtgtt ctttgcctct gttcggctg gtggcagcag tcaggtttat  
3540  
ttcatgacct taggcaggac ttctcttctg agctggtaga agcagtgtga tccagggatt  
3600  
actggcctcc agagtcttca agatcctgag aacttgaat tccttgtaac tggagctcgg  
3660  
agctgcaccg agggcaacca ggacagctgt gtgtgcagac ctcagtgtt gggttctctc  
3720  
ccctccttcc tgttctctt atataccagt ttatcccat tctttttttt tttcttactc  
3780

caaaataaat caaggctgca atgcagctgg tgctgttcag attccaaaaa aaaaaaaaaa

3840

ccatggtacc cggatcctcg aattcc

3866

<210> 5560

<211> 1165

<212> PRT

<213> Homo sapiens

<400> 5560

Met	Ala	Asn	Asp	Ser	Pro	Ala	Lys	Ser	Leu	Val	Asp	Ile	Asp	Leu	Ser
1				5					10					15	
Ser	Leu	Arg	Asp	Pro	Ala	Gly	Ile	Phe	Glu	Leu	Val	Glu	Val	Val	Gly
			20					25					30		
Asn	Gly	Thr	Tyr	Gly	Gln	Val	Tyr	Lys	Gly	Arg	His	Val	Lys	Thr	Gly
			35					40					45		
Gln	Leu	Ala	Ala	Ile	Lys	Val	Met	Asp	Val	Thr	Glu	Asp	Glu	Glu	Glu
	50						55				60				
Glu	Ile	Lys	Leu	Glu	Ile	Asn	Met	Leu	Lys	Lys	Tyr	Ser	His	His	Arg
65					70				75						80
Asn	Ile	Ala	Thr	Tyr	Tyr	Gly	Ala	Phe	Ile	Lys	Lys	Ser	Pro	Pro	Gly
				85					90					95	
His	Asp	Asp	Gln	Leu	Trp	Leu	Val	Met	Glu	Phe	Cys	Gly	Ala	Gly	Ser
			100					105					110		
Ile	Thr	Asp	Leu	Val	Lys	Asn	Thr	Lys	Gly	Asn	Thr	Leu	Lys	Glu	Asp
	115						120					125			
Trp	Ile	Ala	Tyr	Ile	Ser	Arg	Glu	Ile	Leu	Arg	Gly	Leu	Ala	His	Leu
	130					135					140				
His	Ile	His	His	Val	Ile	His	Arg	Asp	Ile	Lys	Gly	Gln	Asn	Val	Leu
145					150					155					160
Leu	Thr	Glu	Asn	Ala	Glu	Val	Lys	Leu	Val	Asp	Phe	Gly	Val	Ser	Ala
			165						170					175	
Gln	Leu	Asp	Arg	Thr	Val	Gly	Arg	Arg	Asn	Thr	Phe	Ile	Gly	Thr	Pro
		180					185						190		
Tyr	Trp	Met	Ala	Pro	Glu	Val	Ile	Ala	Cys	Asp	Glu	Asn	Pro	Asp	Ala
	195						200						205		
Thr	Tyr	Asp	Tyr	Arg	Ser	Asp	Leu	Trp	Ser	Cys	Gly	Ile	Thr	Ala	Ile
	210					215					220				
Glu	Met	Ala	Glu	Gly	Ala	Pro	Pro	Leu	Cys	Asp	Met	His	Pro	Met	Arg
225					230					235					240
Ala	Leu	Phe	Leu	Ile	Pro	Arg	Asn	Pro	Pro	Arg	Leu	Lys	Ser	Lys	
			245						250				255		
Lys	Trp	Ser	Lys	Lys	Phe	Ile	Asp	Phe	Ile	Asp	Thr	Cys	Leu	Ile	Lys
		260					265					270			
Thr	Tyr	Met	Gln	Arg	Pro	Thr	Thr	Glu	Gln	Leu	Leu	Lys	Phe	Pro	Phe
	275						280					285			
Ile	Arg	Asp	Gln	Pro	Thr	Glu	Arg	Gln	Val	Arg	Ile	Gln	Leu	Lys	Asp
	290					295					300				
His	Ile	Asp	Arg	Thr	Arg	Lys	Lys	Arg	Gly	Glu	Lys	Glu	Glu	Thr	Glu
305					310					315					320
Tyr	Glu	Tyr	Ser	Gly	Ser	Glu	Glu	Glu	Asp	Asp	Ser	His	Gly	Glu	Glu
			325						330				335		
Gly	Glu	Pro	Ser	Ser	Ile	Met	Asn	Val	Pro	Gly	Glu	Ser	Thr	Leu	Arg

340 345 350  
Arg Asp Phe Leu Arg Leu Gln Gln Glu Asn Lys Glu Arg Ser Glu Ala  
355 360 365  
Leu Arg Arg Gln Gln Leu Leu Gln Glu Gln Gln Leu Arg Glu Gln Glu  
370 375 380  
Glu Tyr Lys Arg Gln Leu Leu Ala Glu Arg Gln Lys Arg Ile Glu Gln  
385 390 395 400  
Gln Lys Glu Gln Arg Arg Arg Leu Glu Glu Gln Gln Arg Arg Glu Arg  
405 410 415  
Glu Ala Arg Arg Gln Gln Glu Arg Glu Gln Arg Arg Arg Glu Gln Glu  
420 425 430  
Glu Lys Arg Arg Leu Glu Glu Leu Glu Arg Arg Arg Lys Glu Glu Glu  
435 440 445  
Glu Arg Arg Arg Ala Glu Glu Glu Lys Arg Arg Val Glu Arg Glu Gln  
450 455 460  
Glu Tyr Ile Arg Arg Gln Leu Glu Glu Glu Gln Arg His Leu Glu Val  
465 470 475 480  
Leu Gln Gln Gln Leu Leu Gln Glu Gln Ala Met Leu Leu His Asp His  
485 490 495  
Arg Arg Pro His Pro Gln His Ser Gln Gln Pro Pro Pro Pro Gln Gln  
500 505 510  
Glu Arg Ser Lys Pro Ser Phe His Ala Pro Glu Pro Lys Ala His Tyr  
515 520 525  
Glu Pro Ala Asp Arg Ala Arg Glu Val Pro Val Arg Thr Thr Ser Arg  
530 535 540  
Ser Pro Val Leu Ser Arg Arg Asp Ser Pro Leu Gln Gly Ser Gly Gln  
545 550 555 560  
Gln Asn Ser Gln Ala Gly Gln Arg Asn Ser Thr Ser Ser Ile Glu Pro  
565 570 575  
Arg Leu Leu Trp Glu Arg Val Glu Lys Leu Val Pro Arg Pro Gly Ser  
580 585 590  
Gly Ser Ser Ser Gly Ser Ser Asn Ser Gly Ser Gln Pro Gly Ser His  
595 600 605  
Pro Gly Ser Gln Ser Gly Ser Gly Glu Arg Phe Arg Val Arg Ser Ser  
610 615 620  
Ser Lys Ser Glu Gly Ser Pro Ser Gln Arg Leu Glu Asn Ala Val Lys  
625 630 635 640  
Lys Pro Glu Asp Lys Lys Glu Val Phe Arg Pro Leu Lys Pro Ala Gly  
645 650 655  
Glu Val Asp Leu Thr Ala Leu Ala Lys Glu Leu Arg Ala Val Glu Asp  
660 665 670  
Val Arg Pro Pro His Lys Val Thr Asp Tyr Ser Ser Ser Ser Glu Glu  
675 680 685  
Ser Gly Thr Thr Asp Glu Glu Asp Asp Asp Val Glu Gln Glu Gly Ala  
690 695 700  
Asp Glu Ser Thr Ser Gly Pro Glu Asp Thr Arg Ala Ala Ser Ser Leu  
705 710 715 720  
Asn Leu Ser Asn Gly Glu Thr Glu Ser Val Lys Thr Met Ile Val His  
725 730 735  
Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu Gly Thr  
740 745 750  
Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr Leu Gln Lys His  
755 760 765  
Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu Leu Gln

770		775		780
Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser				
785		790		800
Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys				
	805		810	815
Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp				
	820		825	830
Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu				
	835		840	845
Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly				
	850		855	860
Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile				
865		870		880
Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val				
	885		890	895
Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu				
	900		905	910
Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys				
	915		920	925
Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr				
	930		935	940
Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys				
945		950		960
Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe				
	965		970	975
Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val				
	980		985	990
Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser				
	995		1000	1005
Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp				
	1010		1015	1020
Ile Tyr Leu Pro Thr His Val Arg Lys Asn Pro His Ser Met Ile Gln				
1025		1030		1040
Cys Ser Ile Lys Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly				
	1045		1050	1055
Met Glu Leu Leu Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr				
	1060		1065	1070
Tyr Gly Arg Ile Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro				
	1075		1080	1085
Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu				
	1090		1095	1100
Lys Ala Ile Glu Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val				
1105		1110		1120
Phe Met His Lys Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn				
	1125		1130	1135
Asp Lys Val Phe Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val				
	1140		1145	1150
Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu Leu Ser Trp				
	1155		1160	1165

&lt;210&gt; 5561

&lt;211&gt; 2089

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



<400> 5561  
tctagagcag gtgcgaggct gcaccggcag ccgcgggaag ctcgggccgg cagggtttcc  
60  
ccgcacgctg gcgcccagct cccggcgagg aggcggctgt aagtttcgct ttccattcag  
120  
tggaanaacga aagctgggag ggggtgccacg agcgcggggc cagaccaagg cgggcccagg  
180  
gcggaacttc ggtcccagct cgggtccccg ctcagtcccc acgtgggaact cagcagcgga  
240  
ggctggagcg ttgcatggcg cttgagagat tccatcgctg ctggctcaca taagcgcttc  
300  
ctggaagtga agtcgtgctg tcctgaacgc gggccaggca gctgcggcct gggggttttg  
360  
gagtgatcac gaatgagcaa ggcgtttggg ctcctgaggc aaatctgtca gtccatcctg  
420  
gctgagtcct cgcagtcccc ggcagatcct gaagaaaaga aggaagaaga cagcaacatg  
480  
aagagagagc agcccagaga gcgtcccagg gcctgggact accctcatgg cctgggttgg  
540  
ttacacaaca ttggacagac ctgctgcctt aactccttga ttcagggtgt cgtaatgaat  
600  
gtggacttca ccaggatatt gaagaggatc acggtgcca ggggagctga cgagcagagg  
660  
agaagcgctc ctttccagat gcttctgctg ctggagaaga tgcaggacag ccggcagaaa  
720  
gcagtgcggc ccttgagctt ggcctactgc ctgcagaagt gcaacgtgcc cttgtttgtc  
780  
caacatgatg ctgcccact gtacctcaa ctctggaacc tgattaagga ccagatcact  
840  
gatgtgact tgggtggagag actgcaggcc ctgtatacga tccgggtgaa ggactccttg  
900  
atttgcttg actgtgcat ggagagtagc agaaacagca gcatgctac cctcccactt  
960  
tctctttttg atgtggactc aaagcccctg aagacactgg aggacgcctt gactgcttc  
1020  
ttccagccca gggagttatc aagcaaaagc aagtgttct gtgagaactg tgggaagaag  
1080  
accggtggga aacaggtctt gaagctgacc catttgcccc agaccctgac aatccacctc  
1140  
atgcgattct ccatcaggaa ttcacagacg agaaagatct gccactccct gtacttcccc  
1200  
cagagcttgg atttcagcca gatccttcca atgaagcgag agtcttgtga tgctgaggag  
1260  
cagtctggag ggcagtatga gctttttgct gtgattgcgc acgtgggaat ggcagactcc  
1320  
ggtcattact gtgtctacat ccggaatgct gtggatggaa aatgggtctg cttcaatgac  
1380  
tccaatattt gcttgggtgc ctgggaagac atccagtgt cctacggaaa tctaactac  
1440  
cactggcagg aaactgcata tcttctgggt tacatgaaga tggagtgtc atggaaatgc  
1500  
ccaaaacctt cagagattga cagctgtca ttttccattt ccgttcctgg atctacggag  
1560

tcttctaaga gattttgcaa tgaggagaag cattgttttc aaactatata actgagcctt  
 1620  
 atttataatt agggatatta tcaaaatatg taaccatgag gcccctcagg tcctgatcag  
 1680  
 tcagaatgga tgctttcacc agcagacccg gccatgtggc tgctcgggcc tgggtgctcg  
 1740  
 ctgctgtgcy agacattagc cctttagtta tgagcctgtg ggaacttcag ggggtcccag  
 1800  
 tggggagagc agtggcagtg ggaggcatct gggggccaaa ggtcagtggc aggggggtatt  
 1860  
 tcagtattat acaactgctg tgaccagact tgtatactgg ccgaatatca gtgctgtttg  
 1920  
 taatttttca ctttgagaac caacattaat tccatatgaa tcaagtgttt tgtaactgct  
 1980  
 attcatttat tcagcaaata tttattgatc atctcttctc cataagatag tgtgataaac  
 2040  
 acagtcatga ataaagttat tttccacaaa aaaaaaaaaa aaaaaaaaaa  
 2089

<210> 5562

<211> 372

<212> PRT

<213> Homo sapiens

<400> 5562

Met	Ser	Lys	Ala	Phe	Gly	Leu	Leu	Arg	Gln	Ile	Cys	Gln	Ser	Ile	Leu
1				5					10					15	
Ala	Glu	Ser	Ser	Gln	Ser	Pro	Ala	Asp	Leu	Glu	Glu	Lys	Lys	Glu	Glu
			20					25					30		
Asp	Ser	Asn	Met	Lys	Arg	Glu	Gln	Pro	Arg	Glu	Arg	Pro	Arg	Ala	Trp
			35				40					45			
Asp	Tyr	Pro	His	Gly	Leu	Val	Gly	Leu	His	Asn	Ile	Gly	Gln	Thr	Cys
	50					55					60				
Cys	Leu	Asn	Ser	Leu	Ile	Gln	Val	Phe	Val	Met	Asn	Val	Asp	Phe	Thr
65					70				75						80
Arg	Ile	Leu	Lys	Arg	Ile	Thr	Val	Pro	Arg	Gly	Ala	Asp	Glu	Gln	Arg
			85					90						95	
Arg	Ser	Val	Pro	Phe	Gln	Met	Leu	Leu	Leu	Leu	Glu	Lys	Met	Gln	Asp
			100					105						110	
Ser	Arg	Gln	Lys	Ala	Val	Arg	Pro	Leu	Glu	Leu	Ala	Tyr	Cys	Leu	Gln
		115					120					125			
Lys	Cys	Asn	Val	Pro	Leu	Phe	Val	Gln	His	Asp	Ala	Ala	Gln	Leu	Tyr
	130					135					140				
Leu	Lys	Leu	Trp	Asn	Leu	Ile	Lys	Asp	Gln	Ile	Thr	Asp	Val	His	Leu
145				150					155						160
Val	Glu	Arg	Leu	Gln	Ala	Leu	Tyr	Thr	Ile	Arg	Val	Lys	Asp	Ser	Leu
			165					170						175	
Ile	Cys	Val	Asp	Cys	Ala	Met	Glu	Ser	Ser	Arg	Asn	Ser	Ser	Met	Leu
		180						185					190		
Thr	Leu	Pro	Leu	Ser	Leu	Phe	Asp	Val	Asp	Ser	Lys	Pro	Leu	Lys	Thr
		195					200					205			
Leu	Glu	Asp	Ala	Leu	His	Cys	Phe	Phe	Gln	Pro	Arg	Glu	Leu	Ser	Ser
	210					215					220				
Lys	Ser	Lys	Cys	Phe	Cys	Glu	Asn	Cys	Gly	Lys	Lys	Thr	Arg	Gly	Lys

```

225          230          235          240
Gln Val Leu Lys Leu Thr His Leu Pro Gln Thr Leu Thr Ile His Leu
          245          250          255
Met Arg Phe Ser Ile Arg Asn Ser Gln Thr Arg Lys Ile Cys His Ser
          260          265          270
Leu Tyr Phe Pro Gln Ser Leu Asp Phe Ser Gln Ile Leu Pro Met Lys
          275          280          285
Arg Glu Ser Cys Asp Ala Glu Glu Gln Ser Gly Gly Gln Tyr Glu Leu
          290          295          300
Phe Ala Val Ile Ala His Val Gly Met Ala Asp Ser Gly His Tyr Cys
305          310          315          320
Val Tyr Ile Arg Asn Ala Val Asp Gly Lys Trp Phe Cys Phe Asn Asp
          325          330          335
Ser Asn Ile Cys Leu Val Ser Trp Glu Asp Ile Gln Cys Thr Tyr Gly
          340          345          350
Asn Pro Asn Tyr His Trp Gln Glu Thr Ala Tyr Leu Leu Val Tyr Met
          355          360          365
Lys Met Glu Cys
370

```

```

<210> 5563
<211> 2878
<212> DNA
<213> Homo sapiens

```

```

<400> 5563
nagtcaggca gcgaggagccg ccgggagcgg atggcgccgg ccgtagcggc tccactcgcc
60
gccgggggtg aggaggcggc agccacgacc tccgtgcccg ggtctccagg tctgccgggg
120
agacgcagtg cagagcgggc cctagaggag gccgtggcca ccgggaccct gaacctgtct
180
aaccggcgct tgaagcactt cccccggggc gcgggccgta gctacgacct gtcagacatc
240
accaggctg acctgtcccg gaaccgggtt cccgaggtgc ccgaggcggc gtgccagctg
300
gtgtccctgg agggcctgag cctctaccac aattgcctga gatgcctgaa ccagccttg
360
gggaatctca cagccctcac ctacctcaac ctacgccgaa accagctgtc gctgctgcca
420
ccctacatct gccagctgcc cctgagggtc ctcatcgtca gcaacaacaa gctgggagcc
480
ctgccccctg acatcggcac cctgggaagc ctgcgacagc ttgacgtgag cagcaacgag
540
ctccaatccc tgcctcggga actgtgtggc ctctcttccc tgcgggacct caatgtccgg
600
aggaaccagc tcagtacgct gccgaagag ctgggggacc tccctctggt ccgcctggat
660
ttctcctgta accgcgtctc ccgaatccca gtctccttct gccgcctgag gcacctgcag
720
gtcattctgc tggacagcaa ccctctgcag agtccacctg ccaggtctg cctgaagggg
780
aaacttcaca tcttcaagta tttgtccaca gaggccgggc agcgtgggtc ggccctgggg
840

```

gacctggccc cttctcgccc cccgagtttc agtccctgcc ctgcagagga tctatttccg  
900  
ggacatcggg acgatgggtg gctggactca ggcttccaca gcgttgatag tggcagcaag  
960  
agggtggtctg gaaatgagtc aacagatgaa ttttcagagc tgtcattccg gatctcagag  
1020  
ctggccccggg agccccgggg gccagagaaa cgcaaggagg atggctcagc ggacggagac  
1080  
cctgtgcaga ttgacttcat cgacagccat gtccccgggg aggatgaaga gcgaggcact  
1140  
gtggaggagc agcgaccacc cgaattaagc cctggggcag gggacagggg gagggcacca  
1200  
agcagcaggc gggaggagcc ggcaggggag gagcgcgggc gcccgagacac cttgcagctg  
1260  
tggcaggagc ggggaacggcg gcagcagcag cagagcgggg cgtggggggc cccgagggaag  
1320  
gatagcctct tgaagccagg gctcagggct gttgtgggag gggccgccc cgtgtccact  
1380  
caagccatgc acaacggctc gcctaagtcc agtgcctccc aagcaggggg ctgcagcggg  
1440  
gcaggagacc ccgcccctgc cctgcctcc caagagcccc tccccatagc tggaccagcg  
1500  
acagcacctg ctccacggcc acttggtctc attcagagac caaacagctt cctcttccgt  
1560  
tctctctctc agagtggctc aggccttcc tcaccagact ctgtcctgag acctcggcgg  
1620  
tacccccagg ttccagatga gaaggactta atgactcagc tgcgccaggc ccttgagtcc  
1680  
cggtgcagc gggcccctgc tgaggacctg gccgaggctc tggccagtgg ggtcatcctg  
1740  
tgccagctgg ccaaccagct acggccgccc tccgtgccct tcatccatgt gccctcccct  
1800  
gctgtgcca aactcagtgc cctcaaggct cggaagaatg tggagagttt tctagaagcc  
1860  
tgtcgaaaaa tgggggtgcc tgaggctgac ctgtgctcgc cctcgatct cctccagggc  
1920  
actgcccggg ggctgcggac cgcgtggag gccgtgaagc ggggggggg caaggcccta  
1980  
ccgcccctct gggcccctc tgggtctggg ggcttcgtcg tcttctacgt ggtcctcatg  
2040  
ctgctgctct atgtcaccta cactcggctc ctgggttctt agggcccaaa atcgccctc  
2100  
cctcaccctt ttcccttctt ctctatttat aaggctccctg ctccaccga cccacctgc  
2160  
gggtgccttca gcccaccca aagacactag tgcacccctc tcacagacac tgacctcaga  
2220  
ggccccactc tgggtgcccc agaccctggg ccccagcct ctggcctccc tccagtagcc  
2280  
ccacgagtcc ccacctctca gtgctgacgg tgccttcatg tccccgccgg cctgcccct  
2340  
gccctctgta ccccgtagg ggtggcagga gctggagtct ccccttctt cctgtgccct  
2400  
ccccttcccc cccaacagc tgctatgggg gggctaaatt atctctattt thtagagagg  
2460

atctatatatt gtaggggttc ggggccagg ccgggtccct atctctgtgt ataaactgta  
2520  
cagaccgtgg ccgccctgcc tgtgtgtgtg tgtgtgcgcg cgcgcgcgcg tctgctccgt  
2580  
gtgttggtgg ctgtggccat ggctctgtgc ccaccagcat ctccctcctg agatgccggc  
2640  
ctctcatgct cccggagcgt ccgccaaccc cccgtgtcac ctcccttctg ttatcgctga  
2700  
cagctttctt gcgtctcatt tgtcgccgag ccccgagcgc acggtgatgc tcgggtctgc  
2760  
ccccgacccc ctgccacagg ccggaagccg cagggggcac cgtggggaag ctaaccggc  
2820  
cccttcccc aggagtcact gtgccagccc caccatcc tggaagagga ggaggcct  
2878

&lt;210&gt; 5564

&lt;211&gt; 683

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5564

Met	Ala	Ala	Ala	Val	Ala	Ala	Pro	Leu	Ala	Ala	Gly	Gly	Glu	Glu	Ala
1				5				10					15		
Ala	Ala	Thr	Thr	Ser	Val	Pro	Gly	Ser	Pro	Gly	Leu	Pro	Gly	Arg	Arg
			20					25					30		
Ser	Ala	Glu	Arg	Ala	Leu	Glu	Glu	Ala	Val	Ala	Thr	Gly	Thr	Leu	Asn
		35					40					45			
Leu	Ser	Asn	Arg	Arg	Leu	Lys	His	Phe	Pro	Arg	Gly	Ala	Ala	Arg	Ser
	50					55				60					
Tyr	Asp	Leu	Ser	Asp	Ile	Thr	Gln	Ala	Asp	Leu	Ser	Arg	Asn	Arg	Phe
65					70					75				80	
Pro	Glu	Val	Pro	Glu	Ala	Ala	Cys	Gln	Leu	Val	Ser	Leu	Glu	Gly	Leu
			85						90				95		
Ser	Leu	Tyr	His	Asn	Cys	Leu	Arg	Cys	Leu	Asn	Pro	Ala	Leu	Gly	Asn
			100					105					110		
Leu	Thr	Ala	Leu	Thr	Tyr	Leu	Asn	Leu	Ser	Arg	Asn	Gln	Leu	Ser	Leu
		115					120					125			
Leu	Pro	Pro	Tyr	Ile	Cys	Gln	Leu	Pro	Leu	Arg	Val	Leu	Ile	Val	Ser
	130					135				140					
Asn	Asn	Lys	Leu	Gly	Ala	Leu	Pro	Pro	Asp	Ile	Gly	Thr	Leu	Gly	Ser
145					150					155				160	
Leu	Arg	Gln	Leu	Asp	Val	Ser	Ser	Asn	Glu	Leu	Gln	Ser	Leu	Pro	Ser
			165					170					175		
Glu	Leu	Cys	Gly	Leu	Ser	Ser	Leu	Arg	Asp	Leu	Asn	Val	Arg	Arg	Asn
		180						185					190		
Gln	Leu	Ser	Thr	Leu	Pro	Glu	Glu	Leu	Gly	Asp	Leu	Pro	Leu	Val	Arg
		195				200						205			
Leu	Asp	Phe	Ser	Cys	Asn	Arg	Val	Ser	Arg	Ile	Pro	Val	Ser	Phe	Cys
	210					215					220				
Arg	Leu	Arg	His	Leu	Gln	Val	Ile	Leu	Leu	Asp	Ser	Asn	Pro	Leu	Gln
225					230					235				240	
Ser	Pro	Pro	Ala	Gln	Val	Cys	Leu	Lys	Gly	Lys	Leu	His	Ile	Phe	Lys
			245					250					255		
Tyr	Leu	Ser	Thr	Glu	Ala	Gly	Gln	Arg	Gly	Ser	Ala	Leu	Gly	Asp	Leu

	260		265		270
Ala	Pro	Ser	Arg	Pro	Pro
	275		280		285
Phe	Pro	Gly	His	Arg	Tyr
	290		295		300
Val	Asp	Ser	Gly	Ser	Lys
305			310		315
Phe	Ser	Glu	Leu	Ser	Phe
	325		330		335
Gly	Pro	Arg	Glu	Arg	Lys
	340		345		350
Gln	Ile	Asp	Phe	Ile	Asp
	355		360		365
Gly	Thr	Val	Glu	Gln	Arg
	370		375		380
Asp	Arg	Glu	Arg	Ala	Pro
385			390		395
Glu	Arg	Arg	Arg	Pro	Asp
	405		410		415
Arg	Gln	Gln	Gln	Ser	Gly
	420		425		430
Leu	Leu	Lys	Pro	Gly	Leu
	435		440		445
Ser	Thr	Gln	Ala	Met	His
	450		455		460
Ala	Gly	Gly	Cys	Ser	Gly
465			470		475
Gln	Glu	Pro	Leu	Pro	Ile
	485		490		495
Pro	Leu	Gly	Ser	Ile	Gln
	500		505		510
Ser	Gln	Ser	Gly	Ser	Gly
	515		520		525
Arg	Arg	Tyr	Pro	Gln	Val
	530		535		540
Arg	Gln	Val	Leu	Glu	Ser
545			550		555
Ala	Glu	Ala	Leu	Ala	Ser
	565		570		575
Leu	Arg	Pro	Arg	Ser	Val
	580		585		590
Pro	Lys	Leu	Ser	Ala	Leu
	595		600		605
Glu	Ala	Cys	Arg	Lys	Met
	610		615		620
Ser	Asp	Leu	Leu	Gln	Gly
625			630		635
Ala	Val	Lys	Arg	Val	Gly
	645		650		655
Ser	Gly	Leu	Gly	Gly	Phe
	660		665		670
Leu	Tyr	Val	Thr	Tyr	Thr
	675		680		

<210> 5565  
<211> 472  
<212> DNA  
<213> Homo sapiens

<400> 5565  
nggatccaaa cgccgtggcc gcggggccgc gcccgggcag acccgggctc cgctctcacg  
60  
tcacgcggta catgggctac agttccttgt ccgagggctt ccgggagctg gagccgcaca  
120  
gaatgaagg gctcactggc agtgggtccc aacttcgttg catattaaac cccccggaga  
180  
acttaaactc cagtgccag tcctatgcaa tcagatcctg ggtotccact gtgcagcgcc  
240  
cgtggagagc cagcgatgtg gagggtcgag atcaccagc tctttgggga caggggtctca  
300  
ctgcccccaa ggctggagtc cgggtggcgca atcacggctc acagcagtct cgacctccag  
360  
ggctcaagcg atcctccagc ctcagcctcc cgagcagctg ggagcacagg cgcataccac  
420  
gcgtggcttt tttagacga gggcttgcca tgtttcccag gctgggtctg aa  
472

<210> 5566  
<211> 76  
<212> PRT  
<213> Homo sapiens

<400> 5566  
Met Gln Ser Asp Pro Gly Ser Pro Leu Cys Ser Ala Arg Gly Glu Pro  
1 5 10 15  
Ala Met Trp Arg Val Glu Ile Thr Gln Phe Phe Gly Asp Arg Val Ser  
20 25 30  
Leu Pro Pro Arg Leu Glu Ser Gly Gly Ala Ile Thr Ala His Ser Ser  
35 40 45  
Leu Asp Leu Gln Gly Ser Ser Asp Pro Pro Ala Ser Ala Ser Arg Ala  
50 55 60  
Ala Gly Ser Thr Gly Ala Tyr His Ala Trp Leu Phe  
65 70 75

<210> 5567  
<211> 968  
<212> DNA  
<213> Homo sapiens

<400> 5567  
tttttttttt tttttttttt taggttccaa taaaatttta tttatgaaca ctaaaatttg  
60  
aatttcatat gctttttctc tgccacaaaa tattattctt ttgattgtat tcaacctttt  
120  
taaaaaccat ttttagctca caagctgtac aaaaacagac ggtgagtaaa ttggcccaca  
180  
gaccggtttg ctageccctg ggcttaagag atctgtccac ttactcctca acatgcagag  
240

tgtgaactgt gtgaactgca taggccacag caatcttact gcatccattc ccgctgcatc  
 300  
 attatttttg atttgtattc attcagtcca ccgaagcatt cacttggcac ctctccaaat  
 360  
 ctgggtactg tgcaagatcc ttccttggga cactgaagga aaatcagaca cggcccttct  
 420  
 ctcaagtctg cagactctcc ggtatccaga tactacggct ctcatagtat cagaaaacac  
 480  
 agccacaagc gcaggtaagt atcagagggtg ttttacgaga tacatgtatc agattcttaa  
 540  
 ggctgctgta ccaaaatacc acaaactgca tggcttaaaa caacagaaat ttattccctc  
 600  
 acaatcctgg aggccagatg tctgaaatca agatattggt agggttgggt ccttctcgag  
 660  
 actctgaggg agaatctgtg acatgcctgt tttcctagct tctagtact tctccaatt  
 720  
 cttagggttc tttggctcat agatgcattg ctctaattct tgcctccatc ttcccatggc  
 780  
 cttcagctct gtgtgtctat ttccccctct tttctaagag ctagtcattg aatttagggc  
 840  
 ccaccctact acaggttgat ctcatctcca ggtccttgat ttcatctgca aaaacttttt  
 900  
 ccaaataatg tcacacgtgg agattcccag tgaatgtatc tctggggggc cactattcag  
 960  
 cctattac  
 968

<210> 5568  
 <211> 130  
 <212> PRT  
 <213> Homo sapiens

<400> 5568  
 Met Gln Ser Val Asn Cys Val Asn Cys Ile Gly His Ser Asn Leu Thr  
 1 5 10 15  
 Ala Ser Ile Pro Ala Ala Ser Leu Phe Leu Ile Cys Ile His Ser Val  
 20 25 30  
 His Arg Ser Ile His Leu Ala Pro Leu Gln Ile Trp Val Leu Cys Lys  
 35 40 45  
 Ile Leu Pro Trp Asp Thr Glu Gly Lys Ser Asp Thr Ala Leu Leu Ser  
 50 55 60  
 Ser Ser Gln Thr Leu Arg Tyr Pro Asp Thr Thr Ala Leu Ile Val Ser  
 65 70 75 80  
 Glu Asn Thr Ala Thr Ser Ala Gly Lys Tyr Gln Arg Cys Phe Thr Arg  
 85 90 95  
 Tyr Met Tyr Gln Ile Leu Lys Ala Ala Val Pro Lys Tyr His Lys Leu  
 100 105 110  
 His Gly Leu Lys Gln Gln Lys Phe Ile Pro Ser Gln Ser Trp Arg Pro  
 115 120 125  
 Asp Val  
 130

<210> 5569  
 <211> 876



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5569

```

nnntttttttt tttttttttt ttgttaacct agagaaaaaa atttttattta aagacacatt
60
ttaagtaaaa tgaagaacat ttactttatt ttatgtcca gtacagtcaa agcagccaca
120
ttgcataacc ccggggggacc cccttcctct ttgtgatgcc ccagaacaat attgatttga
180
ttatagaaag ccaccggcag cctacatgcg caacggtgag ttgttggtta tatacactgt
240
ggaccatata gtggaatatt acagtcaata aaaggatatt ttagagagaa aaaaaaacat
300
tggaacacgc ttatgatata atgttaggca aaatcgctgt tatgaacagc tcgtttgggg
360
cagagcaaat cctgggaagt aacgctgagg ctgttggtgc aggcggtgga gtacaacatc
420
ttcgagggta tggagtgcc cggctcccca ctagtgttca tcagccaggg caagatcgtc
480
tttgaagacg gaaacatcaa cgtcaacaag ggcattggcc gcttcattcc gcggaaggcg
540
ttcccggagc acagttccac gtggctggaa cttcacaatc atggcagaag gcacgtctgc
600
gaggcatcct ggggctgcac tgctgaccc cttctctctc ccctggccct gagtgtctgc
660
ttcatgtggc tcagcccttc cgtccttcaa gccttcacga gcttcagggc agccccgagt
720
ctgtgcccag gtacactggc taaaatgcag tgtcttccaa atagccatat ctcttttaat
780
cagggagcaa ttccagcatg gaagtcccca tcatgctcct gctggcaggt acaggtgcca
840
gtttgtgacg gatgaaagca ccgacagccc acgcgt
876

```

&lt;210&gt; 5570

&lt;211&gt; 169

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5570

```

Thr Ala Arg Leu Gly Gln Ser Lys Ser Trp Glu Val Thr Leu Arg Leu
1           5           10           15
Leu Val Gln Ala Val Glu Tyr Asn Ile Phe Glu Gly Met Glu Cys His
20           25           30
Gly Ser Pro Leu Val Val Ile Ser Gln Gly Lys Ile Val Phe Glu Asp
35           40           45
Gly Asn Ile Asn Val Asn Lys Gly Met Gly Arg Phe Ile Pro Arg Lys
50           55           60
Ala Phe Pro Glu His Ser Ser Thr Trp Leu Glu Leu His Asn His Gly
65           70           75           80
Arg Arg His Val Cys Glu Ala Ser Trp Gly Cys Thr Ala Asp Pro Leu
85           90           95
Leu Ser Pro Leu Ala Leu Ser Ala Ala Phe Met Trp Leu Ser Pro Ser

```

```

      100      105      110
Val Leu Gln Ala Phe Ile Ser Phe Arg Ala Ala Pro Ser Leu Cys Pro
      115      120      125
Gly Thr Leu Ala Lys Met Gln Cys Leu Pro Asn Ser His Ile Ser Phe
      130      135      140
Asn Gln Gly Ala Ile Pro Ala Trp Lys Ser Pro Ser Cys Ser Cys Trp
145      150      155      160
Gln Val Gln Val Pro Val Cys Asp Gly
      165

```

<210> 5571  
 <211> 405  
 <212> DNA  
 <213> Homo sapiens

```

<400> 5571
aaccagaaag tggatctctt cagcctggga attatcttct ttgagatgtc ctatcacccc
60
atgggtcacgg cttcagaaag gatctttgtt ctcaaccaac tcagagatcc cacttcgcct
120
aagtttccag aagactttga cgatggagag catgcaaagc agaaatcagt catctcctgg
180
ctgttgaacc acgatccagc aaaacggccc acagccacag aactgctcaa gagtgagctg
240
ctgccccac cccagatgga ggagtcagag ctgcatgaag tgctgcacca cacgctgacc
300
aacgtggatg ggaaggccta ccgcaccatg atggcccaga tcttctcgca gcgcctcgct
360
ggggcggggg gaggtggcta ccgctcccgg cttggcgctc cgcg
405

```

<210> 5572  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

```

<400> 5572
Asn Gln Lys Val Asp Leu Phe Ser Leu Gly Ile Ile Phe Phe Glu Met
1      5      10      15
Ser Tyr His Pro Met Val Thr Ala Ser Glu Arg Ile Phe Val Leu Asn
      20      25      30
Gln Leu Arg Asp Pro Thr Ser Pro Lys Phe Pro Glu Asp Phe Asp Asp
      35      40      45
Gly Glu His Ala Lys Gln Lys Ser Val Ile Ser Trp Leu Leu Asn His
      50      55      60
Asp Pro Ala Lys Arg Pro Thr Ala Thr Glu Leu Leu Lys Ser Glu Leu
65      70      75      80
Leu Pro Pro Pro Gln Met Glu Glu Ser Glu Leu His Glu Val Leu His
      85      90      95
His Thr Leu Thr Asn Val Asp Gly Lys Ala Tyr Arg Thr Met Met Ala
      100      105      110
Gln Ile Phe Ser Gln Arg Leu Ala Gly Ala Gly Gly Gly Gly Tyr Arg
      115      120      125
Ser Arg Leu Gly Val Pro Arg

```

130 135

<210> 5573  
<211> 1279  
<212> DNA  
<213> Homo sapiens

<400> 5573  
naaaaacagg tggaatccgg gctggagccg gagctccggc ggcgcggtg gcggcacgtc  
60  
cctccagaca gtaccacagg cacctggagt accggcatcg gtcgctgtgg ccccgagtg  
120  
tccgtcagag cctaggggag cctgccctcc cgcgcctcgt cggggcccg ccaggcacct  
180  
tggccgcccg cgcacggacg cgggcacgag cactagatca cggctgctgg acctcggcac  
240  
gttgacaaga tttctctggg gtaccgcgga ggattacttt gaatttcggt ggtcgcctgt  
300  
ggtctggcat atttagaact taagtctatt atttcgggca ccatgacttt gaggccttta  
360  
gaagactggt gcagggggat ggacatgaac cctcggaaaag cgctattgat tgccggcatc  
420  
tcccagagct gcagtgtggc agaaatcgag gaggctctgc aggtggttt agtcccttg  
480  
ggggagtaca gactgcttgg aaggatgttc aggagggatg agaacaggaa agtagcctta  
540  
gtagggctta ctgcggagac tagtcacgcc ctggcccta aggagatacc gggaaaagg  
600  
ggtatctgga gagtgatctt taagccccct gaccagata atacattttt aagcagatta  
660  
aatgaatttt tagcgggaga gggcatgaca gtgggtgagt tgagcagagc tcttgacat  
720  
gaaaatggct ccttagaccc agagcagggc atgatcccgg aaatgtgggc ccctatgttg  
780  
gcacaggcat tagaggctct tcagcctgcc ctgcaatgct tgaagtataa aaagctgaga  
840  
gtgttctcgg gcagggagtc tccagaacca ggagaagaag aatttgagc ctggatgttt  
900  
catactactc agatgataaa ggcgtggcag gtgccagatg tagagaagag aaggcgattg  
960  
ctagagagcc ttcgaggccc agcacttgat gttattcgtg tcctcaagat aaacaatcct  
1020  
ttaattactg tcgatgaatg tctgcaggct cttgaggagg tatttggggt tacagataat  
1080  
cctagggagt tgcagggtcaa atatctaacc acttaccaga aggatgagga aaagttgtcg  
1140  
gcttatgtac taaggctgga gcctttgtta cagaagctgg tacagagagg agcaattgag  
1200  
agagatgctg tgaatcaggc ccgcctagac caagtcattg ctggggcagt ccacaaaaca  
1260  
attcgcagag agcttaata  
1279

<210> 5574

<211> 312  
 <212> PRT  
 <213> Homo sapiens

<400> 5574

```

Met Thr Leu Arg Leu Leu Glu Asp Trp Cys Arg Gly Met Asp Met Asn
 1           5           10           15
Pro Arg Lys Ala Leu Leu Ile Ala Gly Ile Ser Gln Ser Cys Ser Val
      20           25           30
Ala Glu Ile Glu Glu Ala Leu Gln Ala Gly Leu Ala Pro Leu Gly Glu
      35           40           45
Tyr Arg Leu Leu Gly Arg Met Phe Arg Arg Asp Glu Asn Arg Lys Val
      50           55           60
Ala Leu Val Gly Leu Thr Ala Glu Thr Ser His Ala Leu Val Pro Lys
      65           70           75           80
Glu Ile Pro Gly Lys Gly Gly Ile Trp Arg Val Ile Phe Lys Pro Pro
      85           90           95
Asp Pro Asp Asn Thr Phe Leu Ser Arg Leu Asn Glu Phe Leu Ala Gly
      100          105          110
Glu Gly Met Thr Val Gly Glu Leu Ser Arg Ala Leu Gly His Glu Asn
      115          120          125
Gly Ser Leu Asp Pro Glu Gln Gly Met Ile Pro Glu Met Trp Ala Pro
      130          135          140
Met Leu Ala Gln Ala Leu Glu Ala Leu Gln Pro Ala Leu Gln Cys Leu
      145          150          155          160
Lys Tyr Lys Lys Leu Arg Val Phe Ser Gly Arg Glu Ser Pro Glu Pro
      165          170          175
Gly Glu Glu Glu Phe Gly Arg Trp Met Phe His Thr Thr Gln Met Ile
      180          185          190
Lys Ala Trp Gln Val Pro Asp Val Glu Lys Arg Arg Arg Leu Leu Glu
      195          200          205
Ser Leu Arg Gly Pro Ala Leu Asp Val Ile Arg Val Leu Lys Ile Asn
      210          215          220
Asn Pro Leu Ile Thr Val Asp Glu Cys Leu Gln Ala Leu Glu Glu Val
      225          230          235          240
Phe Gly Val Thr Asp Asn Pro Arg Glu Leu Gln Val Lys Tyr Leu Thr
      245          250          255
Thr Tyr Gln Lys Asp Glu Glu Lys Leu Ser Ala Tyr Val Leu Arg Leu
      260          265          270
Glu Pro Leu Leu Gln Lys Leu Val Gln Arg Gly Ala Ile Glu Arg Asp
      275          280          285
Ala Val Asn Gln Ala Arg Leu Asp Gln Val Ile Ala Gly Ala Val His
      290          295          300
Lys Thr Ile Arg Arg Glu Leu Asn
      305          310

```

<210> 5575  
 <211> 2405  
 <212> DNA  
 <213> Homo sapiens

<400> 5575

```

ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct
60

```

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcatgta ttcagactct  
120  
ttagcatata cagtagagtt tctaattgtt tcagcattcc ctagtgggcg gttacaagtt  
180  
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg  
240  
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga  
300  
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcatcc  
360  
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgtaaacgg caatgagggc  
420  
cgcgtgtctg tggaaaacat caagcagctg ttgcaatgtt tagtcccagg aagcaccact  
480  
ctgcacagtg ctgagatttt ggctgaaatc gcccggatcc ttcggcctgg tggatgtctt  
540  
tttctgaagg agccagtaga gacagctgta gataacaata gcaaagtga gacagcatct  
600  
aagctgtgtt cagccctgac tctttctggt cttgtggaag tgaaagagct gcagcgggag  
660  
cccctaacct ctgaggaagt acagtctgtt cgagaacacc ttggtcatga aagtgacaac  
720  
ctgctgtttg ttcagatcac aggcaaaaaa ccaaactttg aagtgggttc ttctaggcag  
780  
cttaagcttt ccatcaccaa gaagtcttct ccttcagtga aacctgctgt ggacctgtct  
840  
gctgccaaagc tgtggaccct ctgagccaac gatatggagg acgacagcat gtgcatcttc  
900  
tgtggatgta gtttaactca ccgttggcct cttgagcatg tggtcagggt gaacatgatg  
960  
atcaacaaaa aggaggacag ggtgggacacc ttctttaccc tggactccaa gtttcctctc  
1020  
gaagcctgca gtcacttttag cttttcatta gcagagacca cgactgtatc actcattgct  
1080  
ttgaacactc tccaggatct cattgactca gatgagctgc tggatccaga agatttgaag  
1140  
aagccagatc cagcttccct gcgggctgct tcttgtgggg aagggaaaaa gaggaaggcc  
1200  
tgtaagaact gcacctgtgg ccttgctgaa gaactggaaa aagagaagtc aagggaacag  
1260  
atgagctccc aacccaagtc agcttgtgga aactgctacc tgggcgatgc cttccgctgt  
1320  
gccagctgcc cctaccttg gatgccagcc ttcaaacctg gggaaaagg gcttctgagt  
1380  
gatagcaatc ttcagatgc ctaggagggt cctgacatgg gacctatctg ctccctccagc  
1440  
caactcctgt ccctcacatc ccaccatggt ggctcctccc acctcctctg gatttgttca  
1500  
ctctgagatc tgtttgacaga gtgggtgctt agcagacaga gtgaagctgg ctggggggca  
1560  
cagtgggtgt tagtgctgct gtgtatcaaa agaccaagg attatgggac ctggtttcag  
1620  
aatgggatgg gtttcttcac ctcatgttaa gagaaggag tgtgtcctga agaagccctt  
1680

cttctgatgt taaaatgctg accagaacgc tcttgagccc aggcacggtt gagcattaac  
1740  
actctgtgac agagctgcag acccctgcct tgagtctcat ctcagcaatg ctgccaccct  
1800  
cttgtctttc agagttgtta gtttactcca ttctttgtga cacgagtcaa gtggctcaca  
1860  
acctcctcag ggcaccagag gactcactca ctgggtgctg tgatgatata cagtgtccct  
1920  
ctgccccctt ccatcccaa ccacatttga ctgtagcatt gcatctgtgt cctgttgtca  
1980  
tttatgttaa ccttcaggta ttaaacttgc tgcatactct gacatatctt gagattctgc  
2040  
atgtcttgta aagagagggg atgtgcattt gtgtgtgatg ttggatagtc atccacgctc  
2100  
agtttggacc attggaggaa cttagtgtca cgcacaaatg gggctattcc tacgcttaga  
2160  
atagggcttg tctgccact ttagaagagt ccaggttggt gagcatttag agggaagcag  
2220  
ggcagaactc tgaacgacaa tacgtctctc tgagcagaga cccctttgtt cttgttatcc  
2280  
acccatatgg acttgaatc aatcttgcca aatatttggg gagattgtgt ggatttaaga  
2340  
gacctggatt tttatatatt accagtaaat aaaagtttct attgatattc gtccttgaaa  
2400  
cttga  
2405

&lt;210&gt; 5576

&lt;211&gt; 367

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5576

Met	Ala	Asp	Phe	Gly	Ile	Ser	Ala	Gly	Gln	Phe	Val	Ala	Val	Val	Trp
1				5					10					15	
Asp	Lys	Ser	Ser	Pro	Val	Glu	Ala	Leu	Lys	Gly	Leu	Val	Asp	Lys	Leu
			20					25					30		
Gln	Ala	Leu	Thr	Gly	Asn	Glu	Gly	Arg	Val	Ser	Val	Glu	Asn	Ile	Lys
		35				40						45			
Gln	Leu	Leu	Gln	Cys	Leu	Val	Pro	Gly	Ser	Thr	Thr	Leu	His	Ser	Ala
	50					55						60			
Glu	Ile	Leu	Ala	Glu	Ile	Ala	Arg	Ile	Leu	Arg	Pro	Gly	Gly	Cys	Leu
65				70				75						80	
Phe	Leu	Lys	Glu	Pro	Val	Glu	Thr	Ala	Val	Asp	Asn	Asn	Ser	Lys	Val
			85					90						95	
Lys	Thr	Ala	Ser	Lys	Leu	Cys	Ser	Ala	Leu	Thr	Leu	Ser	Gly	Leu	Val
		100						105					110		
Glu	Val	Lys	Glu	Leu	Gln	Arg	Glu	Pro	Leu	Thr	Pro	Glu	Glu	Val	Gln
		115				120						125			
Ser	Val	Arg	Glu	His	Leu	Gly	His	Glu	Ser	Asp	Asn	Leu	Leu	Phe	Val
	130					135					140				
Gln	Ile	Thr	Gly	Lys	Lys	Pro	Asn	Phe	Glu	Val	Gly	Ser	Ser	Arg	Gln
145				150					155					160	
Leu	Lys	Leu	Ser	Ile	Thr	Lys	Lys	Ser	Ser	Pro	Ser	Val	Lys	Pro	Ala

Val	Asp	Pro	Ala	Ala	Ala	Lys	Leu	Trp	Thr	Leu	Ser	Ala	Asn	Asp	Met
			165					170					175		
Glu	Asp	Asp	Ser	Met	Cys	Ile	Phe	Cys	Gly	Cys	Ser	Leu	Thr	His	Arg
		180						185					190		
Trp	Pro	Leu	Glu	His	Val	Val	Arg	Leu	Asn	Met	Met	Ile	Asn	Gln	Lys
		195						200					205		
Glu	Asp	Arg	Val	Asp	Thr	Phe	Phe	Thr	Leu	Asp	Ser	Lys	Phe	Pro	Leu
Glu	Ala	Cys	Ser	His	Phe	Ser	Phe	Ser	Leu	Ala	Glu	Thr	Thr	Thr	Val
Ser	Leu	Ile	Ala	Leu	Asn	Thr	Leu	Gln	Asp	Leu	Ile	Asp	Ser	Asp	Glu
Leu	Leu	Asp	Pro	Glu	Asp	Leu	Lys	Lys	Pro	Asp	Pro	Ala	Ser	Leu	Arg
Ala	Ala	Ser	Cys	Gly	Glu	Gly	Lys	Lys	Arg	Lys	Ala	Cys	Lys	Asn	Cys
Thr	Cys	Gly	Leu	Ala	Glu	Glu	Leu	Glu	Lys	Glu	Lys	Ser	Arg	Glu	Gln
Met	Ser	Ser	Gln	Pro	Lys	Ser	Ala	Cys	Gly	Asn	Cys	Tyr	Leu	Gly	Asp
Ala	Phe	Arg	Cys	Ala	Ser	Cys	Pro	Tyr	Leu	Gly	Met	Pro	Ala	Phe	Lys
Pro	Gly	Glu	Lys	Val	Leu	Leu	Ser	Asp	Ser	Asn	Leu	His	Asp	Ala	

&lt;210&gt; 5577

&lt;211&gt; 659

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5577

ctccacgcag ataagctgtg gttctgctgc ctgtccccc accacaagct gctgcagtac  
60  
ggagacatgg aggagggcng ccagcccgcc taccctnngg agagtctgcc cgagcaactc  
120  
cctgtggccg acatgagggc actcctgaca ggcaaggact gcccccatgt ccgggagaag  
180  
ggctccggga agcagaacaa ggacctctat gagttggcct tctcaatcag ctatgaccgt  
240  
ggggaggagg aagcgtacct caacttcatt gccccctcca agcgggagtt ctacctgtgg  
300  
acagatgggc tcagtgcctt gctgggcagt cccatgggca gcgagcagac acggctggac  
360  
ctggagcagc tgctgaccat ggagaccaag ctgcgtctgc tggagctgga gaacgtgccc  
420  
atccccgagc ggccaccccc tgtgccccca cccccacca acttcaactt ctgctatgac  
480  
tgcagcatcg ctgaaccttg acagtgtggc tggccatggg ccacagctgc ggccactgca  
540  
gcagccatga agggcagtg gtagaggagt gcaggcacc tgaccagcag agattgctgc  
600  
agaaataaag tctgcttggc tcttgggaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa  
659

<210> 5578  
 <211> 166  
 <212> PRT  
 <213> Homo sapiens

<400> 5578  
 Leu His Ala Asp Lys Leu Trp Phe Cys Cys Leu Ser Pro Asn His Lys  
 1 5 10 15  
 Leu Leu Gln Tyr Gly Asp Met Glu Glu Gly Xaa Gln Pro Ala Tyr Pro  
 20 25 30  
 Xaa Glu Ser Leu Pro Glu Gln Leu Pro Val Ala Asp Met Arg Ala Leu  
 35 40 45  
 Leu Thr Gly Lys Asp Cys Pro His Val Arg Glu Lys Gly Ser Gly Lys  
 50 55 60  
 Gln Asn Lys Asp Leu Tyr Glu Leu Ala Phe Ser Ile Ser Tyr Asp Arg  
 65 70 75 80  
 Gly Glu Glu Glu Ala Tyr Leu Asn Phe Ile Ala Pro Ser Lys Arg Glu  
 85 90 95  
 Phe Tyr Leu Trp Thr Asp Gly Leu Ser Ala Leu Leu Gly Ser Pro Met  
 100 105 110  
 Gly Ser Glu Gln Thr Arg Leu Asp Leu Glu Gln Leu Leu Thr Met Glu  
 115 120 125  
 Thr Lys Leu Arg Leu Leu Glu Leu Glu Asn Val Pro Ile Pro Glu Arg  
 130 135 140  
 Pro Pro Pro Val Pro Pro Pro Pro Thr Asn Phe Asn Phe Cys Tyr Asp  
 145 150 155 160  
 Cys Ser Ile Ala Glu Pro  
 165

<210> 5579  
 <211> 1312  
 <212> DNA  
 <213> Homo sapiens

<400> 5579  
 actcctgtat caaccatgag ttcttctcag cctgtgtcac gaccattgca acccatacaa  
 60  
 ccagcaccgc ctcttcaacc atctgggggtg ccaacaagtg gaccatctca gaccaccata  
 120  
 cacttactac ctacagctcc aactaccgtg aatgtaacac atcgtccagt aactcaggtg  
 180  
 accacaagac tccctgtacc aagagctcct gcaaaccacc aggtgggttta tacaactctt  
 240  
 cctgcaccac cagctcaggc tcccttgcca ggaactgtta tgcaggctcc tgctgttcgg  
 300  
 caggtcaatc cccaaaatag tgttacagtt cgagtgcctc aaacaaccac atatgttgta  
 360  
 aacaatggac taaccctggg atcaacagga cctcagctca cagtgcata cgcaccacca  
 420  
 caagtgcata ctgagcccc acgccccgtg caccagcac ccttaccaga agctccacaa  
 480  
 ccacagcgtc tgccccaga agctgccagc acatctctgc ctgagaagcc acatttgaag  
 540



ttagcacgcg ttcagagtca aaatggcata gtactgtcat ggagtgtcct ggaggtggat  
600  
cgaagctgtg ccactgttga tagctaccat ctctatgctt accatgagga acccagtgcc  
660  
actgtgccct cacaatggaa aaagattggg gaagtcaagg cacttccctt gcccatggca  
720  
tgtactctca cccagtttgt atctggtagc aaatactact ttgcagtacg agccaaggat  
780  
atztatggac gttttgggcc tttctgtgat cctcagtcaa cagatgtgat ctcttctacc  
840  
cagagcagtt aaaccttga gcctttatat tttcctcttt taaaatttcc accttttggg  
900  
cttgttttta atcttgtgca tgatacccca tgtaaaatcc accttgtgca agatttcttg  
960  
gacagatgtg tgtatacact acatttgttt ataaccagaa gcaaaataaa ctcagcccac  
1020  
aaagctagaa tcttttcttg gacagtttag gctttggggg ttggaaatgt aaatgtgtac  
1080  
cttgcttttag ttttgaggct ggggaatatg tgtgggtggt tatgtgtggt tttccttatg  
1140  
taggtgttat tgcattggag tctcccatct tcattctcaa atttacctct taaagtacga  
1200  
agtaagtaga tcaaaggatt tgagatgtgt aactggcatg attctgcttt tgaaggatct  
1260  
atagtatcat tttagttaag tgggtcaaac agaatacaaaa caaaacccaa ag  
1312

&lt;210&gt; 5580

&lt;211&gt; 283

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5580

Thr	Pro	Val	Ser	Thr	Met	Ser	Ser	Ser	Gln	Pro	Val	Ser	Arg	Pro	Leu
1				5					10					15	
Gln	Pro	Ile	Gln	Pro	Ala	Pro	Pro	Leu	Gln	Pro	Ser	Gly	Val	Pro	Thr
			20					25					30		
Ser	Gly	Pro	Ser	Gln	Thr	Thr	Ile	His	Leu	Leu	Pro	Thr	Ala	Pro	Thr
			35				40					45			
Thr	Val	Asn	Val	Thr	His	Arg	Pro	Val	Thr	Gln	Val	Thr	Thr	Arg	Leu
			50			55					60				
Pro	Val	Pro	Arg	Ala	Pro	Ala	Asn	His	Gln	Val	Val	Tyr	Thr	Thr	Leu
65					70				75						80
Pro	Ala	Pro	Pro	Ala	Gln	Ala	Pro	Leu	Arg	Gly	Thr	Val	Met	Gln	Ala
				85					90					95	
Pro	Ala	Val	Arg	Gln	Val	Asn	Pro	Gln	Asn	Ser	Val	Thr	Val	Arg	Val
				100				105						110	
Pro	Gln	Thr	Thr	Thr	Tyr	Val	Val	Asn	Asn	Gly	Leu	Thr	Leu	Gly	Ser
			115				120						125		
Thr	Gly	Pro	Gln	Leu	Thr	Val	His	His	Arg	Pro	Pro	Gln	Val	His	Thr
			130				135					140			
Glu	Pro	Pro	Arg	Pro	Val	His	Pro	Ala	Pro	Leu	Pro	Glu	Ala	Pro	Gln
145					150					155					160
Pro	Gln	Arg	Leu	Pro	Pro	Glu	Ala	Ala	Ser	Thr	Ser	Leu	Pro	Gln	Lys

				165				170				175			
Pro	His	Leu	Lys	Leu	Ala	Arg	Val	Gln	Ser	Gln	Asn	Gly	Ile	Val	Leu
180								185				190			
Ser	Trp	Ser	Val	Leu	Glu	Val	Asp	Arg	Ser	Cys	Ala	Thr	Val	Asp	Ser
195				200								205			
Tyr	His	Leu	Tyr	Ala	Tyr	His	Glu	Glu	Pro	Ser	Ala	Thr	Val	Pro	Ser
210				215								220			
Gln	Trp	Lys	Lys	Ile	Gly	Glu	Val	Lys	Ala	Leu	Pro	Leu	Pro	Met	Ala
225				230								235			
Cys	Thr	Leu	Thr	Gln	Phe	Val	Ser	Gly	Ser	Lys	Tyr	Tyr	Phe	Ala	Val
				245								250			
Arg	Ala	Lys	Asp	Ile	Tyr	Gly	Arg	Phe	Gly	Pro	Phe	Cys	Asp	Pro	Gln
260								265				270			
Ser	Thr	Asp	Val	Ile	Ser	Ser	Thr	Gln	Ser	Ser					
275				280											

```
<210> 5581
<211> 720
<212> DNA
<213> Homo sapiens
```

```

<400> 5581
accgtggaaa cgcgggccat ggcgggcaccg cggcaaattcc ccagccacat agtgcgcctc
60
aagcccagct gctctacaga ctcgtcgttc acccggacgc cggtgcccac cgtgtctctc
120
gcgtcccgcg agctgcctgt ctcgtcgtgg caggtcaccg agccgtcaag caagaatctg
180
tgggagcaga tctgcaagga gtatgaagct gagcagcctc cctttccaga aggatataaa
240
gtcaaacagg agcctgtgat tacggttgcg ccagtagagg aaatgctttt tcatggcttc
300
agtgcagagc actattttcc ggtttcccat ttcaccatga tctcacgtac accctgtcct
360
caagataaat cggaaacaat caacccaaaa acatgtttct ccaaagaata tttggaaact
420
ttcatctttc ctgttctgct tcccggaatg gctagcctgc ttcaccaagc gaagaaagaa
480
aaatgttttg aggtcagttg tttggcagga tttctttatt ttgagattct caatcattca
540
ttattatcag atgatagctc attatcttgg taccatcagg ttgttctcca gatgaccctc
600
tcggggagggg aagcctgtgt ttgggggtcac ttaccagtt ccagccacac catctagttg
660
tgcacataca tgcgctgcc a tctgtctggc cacttggact ccggagagct tttccgcctt
720

```

```
<210> 5582
<211> 212
<212> PRT
<213> Homo sapiens
```

<400> 5582  
Met Ala Ala Pro Arg Gln Ile Pro Ser His Ile Val Arg Leu Lys Pro

1				5					10					15	
Ser	Cys	Ser	Thr	Asp	Ser	Ser	Phe	Thr	Arg	Thr	Pro	Val	Pro	Thr	Val
			20					25					30		
Ser	Leu	Ala	Ser	Arg	Glu	Leu	Pro	Val	Ser	Ser	Trp	Gln	Val	Thr	Glu
		35					40					45			
Pro	Ser	Ser	Lys	Asn	Leu	Trp	Glu	Gln	Ile	Cys	Lys	Glu	Tyr	Glu	Ala
	50				55					60					
Glu	Gln	Pro	Pro	Phe	Pro	Glu	Gly	Tyr	Lys	Val	Lys	Gln	Glu	Pro	Val
65				70					75					80	
Ile	Thr	Val	Ala	Pro	Val	Glu	Glu	Met	Leu	Phe	His	Gly	Phe	Ser	Ala
			85					90					95		
Glu	His	Tyr	Phe	Pro	Val	Ser	His	Phe	Thr	Met	Ile	Ser	Arg	Thr	Pro
			100					105					110		
Cys	Pro	Gln	Asp	Lys	Ser	Glu	Thr	Ile	Asn	Pro	Lys	Thr	Cys	Ser	Pro
		115					120					125			
Lys	Glu	Tyr	Leu	Glu	Thr	Phe	Ile	Phe	Pro	Val	Leu	Leu	Pro	Gly	Met
	130					135					140				
Ala	Ser	Leu	Leu	His	Gln	Ala	Lys	Lys	Glu	Lys	Cys	Phe	Glu	Val	Ser
145				150					155					160	
Cys	Leu	Ala	Gly	Phe	Leu	Tyr	Phe	Glu	Ile	Leu	Asn	His	Ser	Leu	Leu
			165					170					175		
Ser	Asp	Asp	Ser	Ser	Leu	Ser	Trp	Tyr	His	Gln	Val	Val	Leu	Gln	Met
			180					185					190		
Thr	Pro	Ser	Gly	Gly	Lys	Ala	Cys	Val	Trp	Gly	His	Leu	Pro	Ser	Ser
		195					200					205			
Ser	His	Thr	Ile												
		210													

&lt;210&gt; 5583

&lt;211&gt; 2101

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5583

```

nnaggccgcg actgcgtgct gctgcaagag gactttctgg cgcacagggg ccgacccac
60
gtctacctgc agcgcattcca gctcaacaac cccacggagc gcgtggccgc gctgcagact
120
gtggggccca ctgccggccc agcccccaat gccttcacca gtaccctgga gaaggctcga
180
gaccatcagt tcctcctcta ctcaggccgg tccccgccta cgcctactgg gttggtgcac
240
ctggtggtgg tggccgcca gaagctggtg aaccgcctcc aagtggctcc caagacgcag
300
ctggatgaga cggtgctgtg ggtggtgcac gtctctggcc ccattaaccc ccaggtgctc
360
aaaagcaaag cagccaagga gctcaaggcg ctgcaggact tggcacggaa ggaaatgctg
420
gagctcttgg acatgccagc ggcggagctg cttcaagacc accagctcct ctgggctcag
480
ctcttcagcc caggagtgga aatgaagaag atcactgaca cccacacgcc gtctggcctc
540
accgtgaacc tgacgtctta ttacatgctc tcctgctcgc cagccctact gctcagcccc
600

```

tccctgagcc acagggagcg agaccagatg gagtcgacgc tcaactatga agatcactgc  
660  
ttcagcgggc acgccaccat gcacgccgag aacctgtggc cggggcggct gtcctccgtc  
720  
cagcagatcc tgcagctctc tgacctgtgg aggtgaccc tccagaagcg tggctgcaag  
780  
gggctggtga aggtgggtgc cccaggcatc ctgcagggga tggctgctcag ctttgggggg  
840  
ctgcagttca cagagaacca cctccagttc caggccgacc ccgacgtgct gcacaacagc  
900  
tatgcattgc atggcatccg ctacaagaac gaccatatca acctggccgt gctgcggatg  
960  
ccgagggcaa gccctaccta cacgtgtccg tggagtcctg tggccagcct gtcnagatc  
1020  
tatgcctgca aggcaggctg cctggacgag ccagtggagc tgacctcggc gccacgggc  
1080  
cacaccttct eggcatggt gacacagccc atcacgccac tgctctacat ctccaccgac  
1140  
ctcacacacc tgcaggacct gcggcacacg ctgcacctca aggccatcct ggcccatgat  
1200  
gagcacatgg cccagcagga ccccgggctg cccttccctc tctggttcag cgtggcctcc  
1260  
ctaatacccc tcttccacct ctctctcttc aagctcatct acaacgagta ctgtgggcct  
1320  
ggagccaagc ccctcttcag gagtaaggaa gatcccagtg tctgagtga ctaacagtcc  
1380  
tgctttcagc caccatttgc acaagacacc cagcactgaa agtcccgtg ccaggagcaa  
1440  
gggatccctt ggaagcacc gccctttgtg ccttggtggg ggaaaccggt gacgcagaag  
1500  
tgagtgtgga tacaccagag tttgcattgg aaggaatgag tgtcacgtgg ggagggaagg  
1560  
ggccagtgga cttttgttaa gctttccact caataaaatg aacctgtatg gcaaatactt  
1620  
gaaatggaac tcactccttc cactttcccc ctttcttctg tcccaggaaa tagatcatct  
1680  
tttgaaaaga ctcttgtcta ggaaaagttg tgtccttttc ctaatttaac gtgttctttc  
1740  
ttaatgaagt ttaatttat ttttgttgag attttgctag atggcttttg catcccctgt  
1800  
agatggtgag tgttggcggg gatgtccgtc tcggcgttcg gagggccac ggtcccagg  
1860  
ctgggcccgg gccccccagg gtggctgtgc tgctgcctgt aggagggtgc gggttgtgct  
1920  
gtcatcctcg ggtttgcacg ccctttttta ggagcctgtg gacatctgtg gttttgtact  
1980  
ttggggcttc aggggaggtg ttttaacttc tagtgattga tgattgtcag gttttgaaat  
2040  
accaagctt ttttgttctg tttttaaata aatatcttcc aaactttaaa aaaaaaaaaa  
2100  
a  
2101  
<210> 5584

<211> 454  
 <212> PRT  
 <213> Homo sapiens

<400> 5584  
 Xaa Gly Arg Asp Cys Val Leu Leu Gln Glu Asp Phe Leu Ala His Arg  
 1 5 10 15  
 Gly Arg Pro His Val Tyr Leu Gln Arg Ile Gln Leu Asn Asn Pro Thr  
 20 25 30  
 Glu Arg Val Ala Ala Leu Gln Thr Val Gly Pro Thr Ala Gly Pro Ala  
 35 40 45  
 Pro Asn Ala Phe Thr Ser Thr Leu Glu Lys Val Gly Asp His Gln Phe  
 50 55 60  
 Leu Leu Tyr Ser Gly Arg Ser Pro Pro Thr Pro Thr Gly Leu Val His  
 65 70 75 80  
 Leu Val Val Val Ala Ala Lys Lys Leu Val Asn Arg Leu Gln Val Ala  
 85 90 95  
 Pro Lys Thr Gln Leu Asp Glu Thr Val Leu Trp Val Val His Val Ser  
 100 105 110  
 Gly Pro Ile Asn Pro Gln Val Leu Lys Ser Lys Ala Ala Lys Glu Leu  
 115 120 125  
 Lys Ala Leu Gln Asp Leu Ala Arg Lys Glu Met Leu Glu Leu Leu Asp  
 130 135 140  
 Met Pro Ala Ala Glu Leu Leu Gln Asp His Gln Leu Leu Trp Ala Gln  
 145 150 155 160  
 Leu Phe Ser Pro Gly Val Glu Met Lys Lys Ile Thr Asp Thr His Thr  
 165 170 175  
 Pro Ser Gly Leu Thr Val Asn Leu Thr Leu Tyr Tyr Met Leu Ser Cys  
 180 185 190  
 Ser Pro Ala Pro Leu Leu Ser Pro Ser Leu Ser His Arg Glu Arg Asp  
 195 200 205  
 Gln Met Glu Ser Thr Leu Asn Tyr Glu Asp His Cys Phe Ser Gly His  
 210 215 220  
 Ala Thr Met His Ala Glu Asn Leu Trp Pro Gly Arg Leu Ser Ser Val  
 225 230 235 240  
 Gln Gln Ile Leu Gln Leu Ser Asp Leu Trp Arg Leu Thr Leu Gln Lys  
 245 250 255  
 Arg Gly Cys Lys Gly Leu Val Lys Val Gly Ala Pro Gly Ile Leu Gln  
 260 265 270  
 Gly Met Val Leu Ser Phe Gly Gly Leu Gln Phe Thr Glu Asn His Leu  
 275 280 285  
 Gln Phe Gln Ala Asp Pro Asp Val Leu His Asn Ser Tyr Ala Leu His  
 290 295 300  
 Gly Ile Arg Tyr Lys Asn Asp His Ile Asn Leu Ala Val Leu Arg Met  
 305 310 315 320  
 Pro Arg Ala Ser Pro Thr Tyr Thr Cys Pro Trp Ser Pro Val Ala Ser  
 325 330 335  
 Leu Ser Xaa Ile Tyr Ala Cys Lys Ala Gly Cys Leu Asp Glu Pro Val  
 340 345 350  
 Glu Leu Thr Ser Ala Pro Thr Gly His Thr Phe Ser Val Met Val Thr  
 355 360 365  
 Gln Pro Ile Thr Pro Leu Leu Tyr Ile Ser Thr Asp Leu Thr His Leu  
 370 375 380  
 Gln Asp Leu Arg His Thr Leu His Leu Lys Ala Ile Leu Ala His Asp

385                      390                      395                      400  
 Glu His Met Ala Gln Gln Asp Pro Gly Leu Pro Phe Leu Phe Trp Phe  
                                  405                      410                      415  
 Ser Val Ala Ser Leu Ile Thr Leu Phe His Leu Phe Leu Phe Lys Leu  
                                  420                      425                      430  
 Ile Tyr Asn Glu Tyr Cys Gly Pro Gly Ala Lys Pro Leu Phe Arg Ser  
                                  435                      440                      445  
 Lys Glu Asp Pro Ser Val  
                                  450

<210> 5585  
 <211> 740  
 <212> DNA  
 <213> Homo sapiens

<400> 5585  
 tttttttttt gctttttttt ttttttttta ctttgaacat tagcattaag ttggttaccg  
 60  
 tacacatcca aaggcccagc atctcagaaa aatcattagg cggcacacct gtaccagagt  
 120  
 ctcaacaaga taaaatatac aatgctacat tgagtgggta aaaatacaca aaaaagtagt  
 180  
 tttacaatc tataaatttt ttatacttaa aatcatgatt gagttgaaat aaaaaagtgc  
 240  
 atttcaattg ctaaaaaaat aatatcggta tagttaacac aagggggaaa tcagtacatt  
 300  
 gagggatctg acaggatgct ggaaaaaatg actcaggga gccgggcagc atgggctcct  
 360  
 ttggagattc aggagcggag ctcaagtcca cctcactgca gttccctggg gccaaacagc  
 420  
 cctcctctcc ccagtatctt tcccatctta agagatcctg tcctacctac ctgtcacctc  
 480  
 cccaacccaa agactcctct aaacttcttt gcagcatgac agctgcctgc cctacactga  
 540  
 gtctacttga ctttcaattg cgtctccgca gagaggtagg agaggacac tgccccattc  
 600  
 tggacttgac ataagtaccc cagccacatg gccttcatcc ttatgaccta gcaggcagaa  
 660  
 cagggaccaa gcagcttcta ttttgtcaaa ctcccttgga caaatattca acattcaaca  
 720  
 acaagctttg taaacctaac  
 740

<210> 5586  
 <211> 87  
 <212> PRT  
 <213> Homo sapiens

<400> 5586  
 Met Gly Ser Phe Gly Asp Ser Gly Ala Glu Leu Ser Ser Thr Ser Leu  
   1                  5                  10                  15  
 Gln Phe Pro Gly Ala Lys Gln Pro Ser Ser Pro Gln Tyr Leu Ser His  
                   20                  25                  30  
 Leu Lys Arg Ser Cys Pro Thr Tyr Leu Ser Pro Pro Gln Pro Lys Asp

35 40 45  
Ser Ser Lys Leu Leu Cys Ser Met Thr Ala Ala Cys Pro Thr Leu Ser  
50 55 60  
Leu Leu Asp Leu Gln Leu Arg Leu Arg Arg Glu Val Gly Glu Gly His  
65 70 75 80  
Cys Pro Ile Leu Asp Leu Thr  
85

<210> 5587  
<211> 853  
<212> DNA  
<213> Homo sapiens

<400> 5587  
tttttttagag attagtattt ccttggtcac aagacaccta attgacttgc aacaagacaa  
60  
aatattcagt gcatctggtt ggggccaaca tggatgatga cgtgtttctc ataagccctt  
120  
ttcattgttt tctcaatttg cttcagaaaa acttgcgagg ttcgtccaca taaagtgtgc  
180  
acagtctcca aaaacttcag ctgaaggggg taatacatgg attgaaagag attgtcttga  
240  
aagggaaaat cccgtattgc ttcataagagt gctctgaacg ttggttgctt atcgtcatgg  
300  
tagacgctc gggttccatg cagaacagac acaccttcat gctcagcctc tctgcagttg  
360  
cttccgtaca tgcagtgatc gggacggtag ttccactggc aggggaatac atagagacac  
420  
tctgggttga aataaaaaat aatatttaaat aaatcctggt ctccccacgt gatggcattc  
480  
ttgtacttct ggtacagagg gtacaacatg tcctcccaag ccaggcctgt tggaatcatg  
540  
ctgttcttga actgggtact tcttatccga gttaaattca ttaacatgac tcctgaatta  
600  
actcctgcag agccatagaa aggatgccta gcaaagcggc tgtaccagcc aatcttgggg  
660  
atttcgtgct caggggccat ggctgcaagc tgggtggaat taaacagcct cagaagcttc  
720  
cagatgtcat caacaggtct cagaaagagg acatcgggtg ccacgtagag aagtgaagtc  
780  
acatccttta aaatcaccgg aagaaagagt ctctgggcag cacagggttt gaacaatttc  
840  
ttccactcct gag  
853

<210> 5588  
<211> 204  
<212> PRT  
<213> Homo sapiens

<400> 5588  
Met Ala Pro Glu His Glu Ile Pro Lys Ile Gly Trp Tyr Ser Arg Phe  
1 5 10 15  
Ala Arg His Pro Phe Tyr Gly Ser Ala Gly Val Asn Ser Gly Val Met

	20		25		30										
Leu	Met	Asn	Leu	Thr	Arg	Ile	Arg	Ser	Thr	Gln	Phe	Lys	Asn	Ser	Met
	35		40		45										
Ile	Pro	Thr	Gly	Leu	Ala	Trp	Glu	Asp	Met	Leu	Tyr	Pro	Leu	Tyr	Gln
	50		55		60										
Lys	Tyr	Lys	Asn	Ala	Ile	Thr	Trp	Gly	Asp	Gln	Asp	Leu	Leu	Asn	Ile
65			70		75									80	
Ile	Phe	Tyr	Phe	Asn	Pro	Glu	Cys	Leu	Tyr	Val	Phe	Pro	Cys	Gln	Trp
	85		90		95										
Asn	Tyr	Arg	Pro	Asp	His	Cys	Met	Tyr	Gly	Ser	Asn	Cys	Arg	Glu	Ala
	100		105		110										
Glu	His	Glu	Gly	Val	Ser	Val	Leu	His	Gly	Asn	Arg	Gly	Val	Tyr	His
	115		120		125										
Asp	Asp	Lys	Gln	Pro	Thr	Phe	Arg	Ala	Leu	Tyr	Glu	Ala	Ile	Arg	Asp
	130		135		140										
Phe	Pro	Phe	Gln	Asp	Asn	Leu	Phe	Gln	Ser	Met	Tyr	Tyr	Pro	Leu	Gln
145			150		155									160	
Leu	Lys	Phe	Leu	Glu	Thr	Val	His	Thr	Leu	Cys	Gly	Arg	Ile	Pro	Gln
	165		170		175										
Val	Phe	Leu	Lys	Gln	Ile	Glu	Lys	Thr	Met	Lys	Arg	Ala	Tyr	Glu	Lys
	180		185		190										
His	Val	Ile	Ile	His	Val	Gly	Pro	Asn	Gln	Met	His				
	195		200												

&lt;210&gt; 5589

&lt;211&gt; 1327

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5589

```

nncccccttc cccctccac agctgcctcc atttccttaa ggaagggttt ttttctctct
60
ccctccccca caccgtagcg gcgcgcgagc gggccgggcg ggcggccgag ttttccaaga
120
gataacttca ccaagatgtc cagtgatagg caaagggtccg atgatgagag cccagcacc
180
agcagtggca gttcagatgc ggaccagcga gaccagccg ctccagagcc tgaagaacaa
240
gaggaaagaa aaccttctgc caccagcag aagaaaaaca ccaaactctc tagcaaaacc
300
actgctaagt tatccactag tgctaaaaga attcagaagg agctagctga aataaccctt
360
gatcctcctc ctaattgcag tgctgggcct aaaggagata acatttatga atggagatca
420
actatacttg gtccaccggg ttctgtatat gaagggtggtg tgttttttct ggatatcaca
480
ttttcatcag attatccatt taagccacca aagggttactt tccgcaccag aatctatcac
540
tgcaacatca acagtcaggg agtcattctgt ctggacatcc ttaaagacaa ctggagtccc
600
gctttgacta tttcaaagg tttgctgtct atttggtccc ttttgacaga ctgcaaccct
660
gcggatcctc tggttggaag catagccact cagtatttga ccaacagagc agaacacgac
720

```



aggatagcca gacagtggac caagagatac gcaacataat tcacataatt tgtatgcagt  
 780  
 gtgaaggagc agaaggcatc ttctcactgt gctgcaaatac tttatagcct ttacaatacg  
 840  
 gacttctgtg tatatgttat actgattcta ctctgctttt atcctttgga gcctgggaga  
 900  
 ctccccaaaa aggtaaatgc tatcaagagt agaactttgt agctgtagat tagttatgtt  
 960  
 taaaacgcct acttgcaagt cttgcttctt tgggatatca aaatgtatct tgtgatgtac  
 1020  
 taaggatact ggtcctgaag tctaccaaatt attatagtgc attttagcct aattcattat  
 1080  
 ctgtatgaag ttataaaagt agctgtagat ggctaggaat tatgtcattt gtattaaacc  
 1140  
 cagatctatt tctgagtatg tggttcatgc tgttgtgaaa aatgttttac cttttacctt  
 1200  
 tgtcagtttg taatgagagg atttcctttt accctttgta gtcagagag cacctgatgt  
 1260  
 atcatctcaa acacaataaa catgctcctg aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1320  
 aaaaaaaa  
 1327

&lt;210&gt; 5590

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5590

Met	Ser	Ser	Asp	Arg	Gln	Arg	Ser	Asp	Asp	Glu	Ser	Pro	Ser	Thr	Ser
1				5					10					15	
Ser	Gly	Ser	Ser	Asp	Ala	Asp	Gln	Arg	Asp	Pro	Ala	Ala	Pro	Glu	Pro
			20					25					30		
Glu	Glu	Gln	Glu	Glu	Arg	Lys	Pro	Ser	Ala	Thr	Gln	Gln	Lys	Lys	Asn
		35					40				45				
Thr	Lys	Leu	Ser	Ser	Lys	Thr	Thr	Ala	Lys	Leu	Ser	Thr	Ser	Ala	Lys
	50					55				60					
Arg	Ile	Gln	Lys	Glu	Leu	Ala	Glu	Ile	Thr	Leu	Asp	Pro	Pro	Pro	Asn
65					70					75					80
Cys	Ser	Ala	Gly	Pro	Lys	Gly	Asp	Asn	Ile	Tyr	Glu	Trp	Arg	Ser	Thr
			85					90					95		
Ile	Leu	Gly	Pro	Pro	Gly	Ser	Val	Tyr	Glu	Gly	Gly	Val	Phe	Phe	Leu
		100						105				110			
Asp	Ile	Thr	Phe	Ser	Ser	Asp	Tyr	Pro	Phe	Lys	Pro	Pro	Lys	Val	Thr
	115						120				125				
Phe	Arg	Thr	Arg	Ile	Tyr	His	Cys	Asn	Ile	Asn	Ser	Gln	Gly	Val	Ile
	130					135				140					
Cys	Leu	Asp	Ile	Leu	Lys	Asp	Asn	Trp	Ser	Pro	Ala	Leu	Thr	Ile	Ser
145				150					155					160	
Lys	Val	Leu	Leu	Ser	Ile	Cys	Ser	Leu	Leu	Thr	Asp	Cys	Asn	Pro	Ala
		165						170					175		
Asp	Pro	Leu	Val	Gly	Ser	Ile	Ala	Thr	Gln	Tyr	Leu	Thr	Asn	Arg	Ala
	180						185						190		
Glu	His	Asp	Arg	Ile	Ala	Arg	Gln	Trp	Thr	Lys	Arg	Tyr	Ala	Thr	

195 200 205

<210> 5591  
<211> 2194  
<212> DNA  
<213> Homo sapiens

<400> 5591  
g c g g c t a t g c c g t c t g g c t c t g c t c g t c c t g t t g c t c c t g g g c c c g g c g g c t g g t g c c t  
60  
t g c a g a a c c c c c a c g c g a c a g c t g c g g g a g g a a c t t g t c a t c a c c c c g c t g c c t t c c g g g  
120  
g a c g t a g c c g c c a c a t t c c a g t c c g c a c g c g t t g g g a t t c g g a t c t g c a g c g g g a a g g a  
180  
g t g t c c c a t t a c a g g c t c t t c c c t a a g c c c t g g g a c a g c t g a t c t c c a a g t a t t c t c t a  
240  
c g g g a g c t c c a c c t g t c a t t c a c g c a a g g c t t t t g g a g g a c c c g a t a c t g g g g c c a c c c  
300  
t t c c t g c a g g c t c c g t c a g g t g c a g a g c t c t g g g t c t g g t t c c a a g a c a c t g t c a c t g a t  
360  
g t g g a t a a g t c c t g g a g g g a g c t c a g t a a t g t c c t c t c a g g g a t c t t c t g c g c c t c t c t c  
420  
a a c t t c a t c g a c c c a c c a c a c a g t c a c t c c c a c t g c c t c c t t c a a a c c c c t g g g t c t g  
480  
g c c a a t g a c a c t g a c c a c t a c t t t c t g c g c t a t g c t g t g c t g c c g c g g g a g g t g g t c t g c  
540  
a c c g a a a a c c t c a c c c c c t g g a a g a g c t c t t g c c c t g t a g t t c c a a g g c a g g c c t c t c t  
600  
g t g c t g c t g a a g g c a g a t c g c t t g t t c c a c a c c a g c t a c c a c t c c c a g g c a g t g c a t a t c  
660  
c g c c c t g t t t g c a g a a a t g c a c g t g t a c t a g c a t c t c c t g g g a g c t g a g g c a g a c c c t g  
720  
t c a g t t g t a t t t g a t g c c t t c a t c a c g g g g c a g g g a a a g a a g a c t g g t c c c t c t t c c g g  
780  
a t g t t c t c c c g a a c c c t c a c g g a g c c c t g c c c c t g g c t t c a g a g a g c c g a g t c t a t g t g  
840  
g a c a t c a c c a c c t a c a a c c a g c c c t g c c t t t g t g t c c a g g a c a a c g a g a c a t t a g a g g t g  
900  
c a c c c a c c c c c g a c c a c t a c a t a t c a g g a c g t c a t c c t a g g c a c t c g g a a g a c c t a t g c c  
960  
a t c t a t g a c t t g c t t g a c a c c g c a t g a t c a a c a a c t c t c g a a a c c t c a a c a t c c a g c t c  
1020  
a a g t g g a a g a g a c c c c c a g a g a a t g a g g c c c c c c a g t g c c c t t c c t g c a t g c c c a g c g g  
1080  
t a c g t g a g t g g c t a t g g g c t g c a g a a g g g g g a g c t g a g c a c a c t g c t g t a c a a c a c c c a c  
1140  
c c a t a c c g g g c c t t c c c g g t g c t g c t g c t g g a c a c c g t a c c c t g g t a t c t g c g g c t g t a t  
1200  
g t g c a c a c c c t c a c c a t c a c c t c c a a g g g c a a g g a g a a c a a c c a a g t t a c a t c c a c t a c  
1260  
c a g c c t g c c c a g g a c c g g c t g c a a c c c c a c c t c c t g g a g a t g c t g a t t c a g c t g c c g g c c  
1320  
a a c t c a g t c a c c a a g g t t t c a t c c a g t t t g a g c g g g c g c t g c t g a a g t g g a c c g a g t a c  
1380

acaccagatc ctaaccatgg cttctatgtc agcccatctg tectcagcgc ccttgtgccc  
1440  
agcatggtag cagccaagcc agtggactgg gaagagagtc ccctcttcaa cagcctgttc  
1500  
ccagtctctg atggctctaa ctactttgtg cggctctaca cggagccgct gctggggaac  
1560  
ctgccgacac cggacttcag catgccctac aacgtgatct gcctcacgtg cactgtgggtg  
1620  
gccgtgtgct acggctcctt ctacaatctc ctcacccgaa ccttccacat cgaggagccc  
1680  
cgcacagggtg gcctggccaa gcggctggcc aaccttatcc ggcgcgcccg aggtgtcccc  
1740  
ccactctgat tcttgccctt tccagcagct gcagctgccg tttctctctg gggaggggag  
1800  
cccaagggct gtttctgcca cttgctctcc tcagagttgg cttttgaacc aaagtgcctt  
1860  
ggaccaggtc agggcctaca gctgtgttgt ccagtacagg agccacgagc caaatgtggc  
1920  
atgtgaattt gaattaactt agaaattcat ttcctcacct gtagtggcca cctctatatt  
1980  
gaggtgtctc ataagcaaaa gtggctcgggtg gctgctgtat tggacagcac agaaaaagat  
2040  
ttccatcacc acagaaaggt cggctggcag cactggccaa ggtgatgggg tgtgctacac  
2100  
agtgtatgtc actgtgtagt ggatggagtt tactgtttgt ggaataaaaa cggctgtttc  
2160  
cgtgaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa  
2194

&lt;210&gt; 5592

&lt;211&gt; 580

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5592

Met	Pro	Ser	Gly	Ser	Ala	Arg	Pro	Val	Ala	Pro	Gly	Ala	Arg	Arg	Leu
1				5					10					15	
Val	Pro	Cys	Arg	Thr	Pro	Thr	Arg	Gln	Leu	Arg	Glu	Glu	Leu	Val	Ile
			20					25					30		
Thr	Pro	Leu	Pro	Ser	Gly	Asp	Val	Ala	Ala	Thr	Phe	Gln	Phe	Arg	Thr
			35				40					45			
Arg	Trp	Asp	Ser	Asp	Leu	Gln	Arg	Glu	Gly	Val	Ser	His	Tyr	Arg	Leu
			50			55					60				
Phe	Pro	Lys	Ala	Leu	Gly	Gln	Leu	Ile	Ser	Lys	Tyr	Ser	Leu	Arg	Glu
65				70					75					80	
Leu	His	Leu	Ser	Phe	Thr	Gln	Gly	Phe	Trp	Arg	Thr	Arg	Tyr	Trp	Gly
				85				90						95	Pro Phe Leu
Gln	Ala	Pro	Ser	Gly	Ala	Glu	Leu	Trp	Val	Trp	Phe				
			100					105				110			
Gln	Asp	Thr	Val	Thr	Asp	Val	Asp	Lys	Ser	Trp	Arg	Glu	Leu	Ser	Asn
			115				120					125			
Val	Leu	Ser	Gly	Ile	Phe	Cys	Ala	Ser	Leu	Asn	Phe	Ile	Asp	Ser	Thr
			130			135					140				
Asn	Thr	Val	Thr	Pro	Thr	Ala	Ser	Phe	Lys	Pro	Leu	Gly	Leu	Ala	Asn

145					150					155				160
Asp	Thr	Asp	His	Tyr	Phe	Leu	Arg	Tyr	Ala	Val	Leu	Pro	Arg	Glu
				165					170					175
Val	Cys	Thr	Glu	Asn	Leu	Thr	Pro	Trp	Lys	Lys	Leu	Leu	Pro	Cys
			180					185					190	
Ser	Lys	Ala	Gly	Leu	Ser	Val	Leu	Leu	Lys	Ala	Asp	Arg	Leu	Phe
		195					200				205			His
Thr	Ser	Tyr	His	Ser	Gln	Ala	Val	His	Ile	Arg	Pro	Val	Cys	Arg
	210				215					220				Asn
Ala	Arg	Cys	Thr	Ser	Ile	Ser	Trp	Glu	Leu	Arg	Gln	Thr	Leu	Ser
225					230					235				240
Val	Phe	Asp	Ala	Phe	Ile	Thr	Gly	Gln	Gly	Lys	Lys	Asp	Trp	Ser
			245					250						255
Phe	Arg	Met	Phe	Ser	Arg	Thr	Leu	Thr	Glu	Pro	Cys	Pro	Leu	Ala
		260					265						270	Ser
Glu	Ser	Arg	Val	Tyr	Val	Asp	Ile	Thr	Thr	Tyr	Asn	Gln	Pro	Cys
	275					280					285			Leu
Cys	Val	Gln	Asp	Asn	Glu	Thr	Leu	Glu	Val	His	Pro	Pro	Pro	Thr
	290					295				300				Thr
Thr	Tyr	Gln	Asp	Val	Ile	Leu	Gly	Thr	Arg	Lys	Thr	Tyr	Ala	Ile
305				310						315				320
Asp	Leu	Leu	Asp	Thr	Ala	Met	Ile	Asn	Asn	Ser	Arg	Asn	Leu	Asn
			325					330					335	Ile
Gln	Leu	Lys	Trp	Lys	Arg	Pro	Pro	Glu	Asn	Glu	Ala	Pro	Pro	Val
	340						345					350		Pro
Phe	Leu	His	Ala	Gln	Arg	Tyr	Val	Ser	Gly	Tyr	Gly	Leu	Gln	Lys
	355					360				365				Gly
Glu	Leu	Ser	Thr	Leu	Leu	Tyr	Asn	Thr	His	Pro	Tyr	Arg	Ala	Phe
	370				375					380				Pro
Val	Leu	Leu	Leu	Asp	Thr	Val	Pro	Trp	Tyr	Leu	Arg	Leu	Tyr	Val
385				390						395				His
Thr	Leu	Thr	Ile	Thr	Ser	Lys	Gly	Lys	Glu	Asn	Lys	Pro	Ser	Tyr
			405						410					415
His	Tyr	Gln	Pro	Ala	Gln	Asp	Arg	Leu	Gln	Pro	His	Leu	Leu	Glu
	420						425					430		Met
Leu	Ile	Gln	Leu	Pro	Ala	Asn	Ser	Val	Thr	Lys	Val	Ser	Ile	Gln
	435					440					445			Phe
Glu	Arg	Ala	Leu	Leu	Lys	Trp	Thr	Glu	Tyr	Thr	Pro	Asp	Pro	Asn
	450				455					460				His
Gly	Phe	Tyr	Val	Ser	Pro	Ser	Val	Leu	Ser	Ala	Leu	Val	Pro	Ser
465				470						475				480
Val	Ala	Ala	Lys	Pro	Val	Asp	Trp	Glu	Glu	Ser	Pro	Leu	Phe	Asn
			485					490					495	Ser
Leu	Phe	Pro	Val	Ser	Asp	Gly	Ser	Asn	Tyr	Phe	Val	Arg	Leu	Tyr
	500						505					510		Thr
Glu	Pro	Leu	Leu	Val	Asn	Leu	Pro	Thr	Pro	Asp	Phe	Ser	Met	Pro
	515					520					525			Tyr
Asn	Val	Ile	Cys	Leu	Thr	Cys	Thr	Val	Val	Ala	Val	Cys	Tyr	Gly
	530				535					540				Ser
Phe	Tyr	Asn	Leu	Leu	Thr	Arg	Thr	Phe	His	Ile	Glu	Glu	Pro	Arg
545				550						555				560
Gly	Gly	Leu	Ala	Lys	Arg	Leu	Ala	Asn	Leu	Ile	Arg	Arg	Ala	Arg
			565					570					575	Gly
Val	Pro	Pro	Leu											

580

&lt;210&gt; 5593

&lt;211&gt; 3078

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5593

nggacactgc agccggagtc cgggaggggc cgcgccgcca ccgtctgaac taggatgtcc  
60  
cgacatgaag gtgtcagctg tgatgcatgt ttaaaaggaa attttcgagg tcgcagatat  
120  
aagtgtttaa tttgctacga ttacgatctt tgtgcatctt gttatgaaag tgggtgcaaca  
180  
acaacaaggc atacaactga ccaccaatg cagtgcatat taacaagggt agattttgat  
240  
ttatactatg gtggggaagc tttctctgta gagcagccac agtcttttac ttgtccctat  
300  
tgtggaaaaa tgggctatac ggagacatct cttcaagaac atgttacttc tgaacatgca  
360  
gaaacatcaa cagaagtgat ttgtccaata tgtgcagcgt tacctggagg cgatcctaata  
420  
catgtcacgg atgactttgc agctcatctt acacttgaac acagagcccc tagagattta  
480  
gatgaatcga gtggtgttcg acatgtacgt agaatgtttc accctggccg gggattagga  
540  
ggctctcgtg ctcttagatc aaacatgcac ttactagca gttctactgg tggactttct  
600  
tcttctcaga gtccatattc tccaagcaat agggaagcca tggatcctat agctgagctt  
660  
ttatctcagt tatcaggagt gagacgttct gcaggaggac agcttaattc ctctggccct  
720  
tccgcttctc agttacaaca actgcagatg cagctgcagc tagaacggca gcatgcccag  
780  
gcagcacggc aacaactgga gaccgcacgc aacgcaaccc ggcgtaacta cacaagcagt  
840  
gtcaccacta caatcacaca atccacagca acaaccaaca tagctaatac agaaagcagt  
900  
cagcagactc tacagaattc ccagtttctt ttaacaagggt tgaatgatcc taaaatgtct  
960  
gaaacggagc gccagtccat ggaaagcgag cgtgcagacc gcagcctgtt tgtccaagag  
1020  
ctccttctgt ccactttagt gcgtgaagag agctcatcct cagatgagga tgatcggggg  
1080  
gagatggcag attttggtgc tatgggctgt gtagatatta tgcctttaga tgttgcttta  
1140  
gaaaacctaa atttaaaaga gagtaataaa ggaaatgagc ctccaccacc tcctctttga  
1200  
tgacatccca attcgagac aatgtcctct gtgctgtatt tgccaatgaa agtggacaac  
1260  
aactatcttg ggtttgtttg gtgattgtaa tttcaggctc gtcactcttg ttacattgtg  
1320  
tacattcaaa aggaagagag aaaatatata tgataatcat ttccacttaa ctaattttta  
1380

4774

cttctagcag gtaaagttag gtagcagtc aggggtgatc tctgcttcc gtaccttgac  
1440  
atgcaaaagg ctctcctaact actccacatt caaactgaag aggaaaattg aaatctctaa  
1500  
tgaagctgct gtgtgtattt atgaatatta atgaataaaa actgcttgga tggtttacct  
1560  
taactactgc atgaggtttt ttgcagcgtg catgagtttt agtgaccttg ttatttaaga  
1620  
agttaaatac aaggagtaaa acttaaaaaa aaaatacaaa gcccaaagct tcccaaaca  
1680  
ttattcaatg gttacacgac gaagtagctt ttgaataatg tctgcctgaa tcacctttct  
1740  
ttgtgtgcct cctacgcaca aagccagctc tgcagtggaa tctggggatt atagccgggt  
1800  
gtggcactcc gccctgtgtg actgtcctgt cgcctgtta gtcactctgc ctgtgtggag  
1860  
ctcagcctgt ctctttaact catctgtaga agacacacca gtaaagctac tgttggaatc  
1920  
tgctgcaggg gcccttgtgt gccctaaaaa caaatcctgt tcatgtttgt ttaaagtttt  
1980  
tactttttgt gggtgtttta aattttttca attgttaaatt atgttttatt cagggttaga  
2040  
tgaatttcac ttattgactg ttcaacagag ttaacctgaa ttatgttgc tttgttttta  
2100  
aaaatctcac attctcaatc atattttgca ttatttatgt atttgctttg tagtttgctg  
2160  
agacagatca gtatcagggg agctttgagg atttgcttcc ccagatttgt cagtatatta  
2220  
caaccaaat cttaagtcta attttagcac cttttattta ttgggttttt tctggcataa  
2280  
aaagtaaagc cttttaattg aatcatgcc cctatatgcc tatattatta atcctatgtg  
2340  
taaaaaaaat gtacagcttt ttttgggttt gttttgggtt ttggaagggc cgggttattt  
2400  
tttttttcc ttttcagttt ttgtgcatag actttcaca tagctccaag gcagggacag  
2460  
cgggtttggg gggtgggagg gcagtttttg gaatgtaaatt ttaggacttt taaaagggtg  
2520  
cgcacagctt ctgataaatt tataactaga cttaacctaa tcatgtctcg ttccagttct  
2580  
cttttctctg agcccttttc aaagtctcct ctctttctcc tgtcatcctt ttcctttcct  
2640  
gtccgtgtat ctccgtttct tcaacatgac aagcatacag acttgaacac ccctccgggtg  
2700  
ttcttccgag aactgtgaag tccatgttca tccaaatgta accaaaaaag aagtcaccct  
2760  
acatgtctga aaaactgttg cttctcctct gaaacttcaa actccaacga tttccaaata  
2820  
caatagcttt gttttcttta gttctgtaat ggataatgtt taaaggaaaa ctttacacca  
2880  
ggcttctggt tacactagaa gtcaagccca ttagggattt tcattttttt tcatttggtt  
2940  
gttgagaagt ttcaaaaatc agttttcaag ctgtgggtct tcaaacacat ctgcacataa  
3000

gtcacacatt tcaataaagc attttcaaga ctgttgaaaa aaaaaaaaaa aaaaaaaaaa

3060

aaaaaaaaaa aaaaaaaa

3078

<210> 5594

<211> 296

<212> PRT

<213> Homo sapiens

<400> 5594

Met	Gly	Tyr	Thr	Glu	Thr	Ser	Leu	Gln	Glu	His	Val	Thr	Ser	Glu	His
1				5				10						15	
Ala	Glu	Thr	Ser	Thr	Glu	Val	Ile	Cys	Pro	Ile	Cys	Ala	Ala	Leu	Pro
			20					25					30		
Gly	Gly	Asp	Pro	Asn	His	Val	Thr	Asp	Asp	Phe	Ala	Ala	His	Leu	Thr
		35					40					45			
Leu	Glu	His	Arg	Ala	Pro	Arg	Asp	Leu	Asp	Glu	Ser	Ser	Gly	Val	Arg
	50					55				60					
His	Val	Arg	Arg	Met	Phe	His	Pro	Gly	Arg	Gly	Leu	Gly	Gly	Pro	Arg
65				70				75						80	
Ala	Arg	Arg	Ser	Asn	Met	His	Phe	Thr	Ser	Ser	Ser	Thr	Gly	Gly	Leu
			85					90					95		
Ser	Ser	Ser	Gln	Ser	Ser	Tyr	Ser	Pro	Ser	Asn	Arg	Glu	Ala	Met	Asp
			100					105					110		
Pro	Ile	Ala	Glu	Leu	Leu	Ser	Gln	Leu	Ser	Gly	Val	Arg	Arg	Ser	Ala
		115					120					125			
Gly	Gly	Gln	Leu	Asn	Ser	Ser	Gly	Pro	Ser	Ala	Ser	Gln	Leu	Gln	Gln
		130				135					140				
Leu	Gln	Met	Gln	Leu	Gln	Leu	Glu	Arg	Gln	His	Ala	Gln	Ala	Ala	Arg
145				150				155						160	
Gln	Gln	Leu	Glu	Thr	Ala	Arg	Asn	Ala	Thr	Arg	Arg	Thr	Asn	Thr	Ser
			165					170					175		
Ser	Val	Thr	Thr	Thr	Ile	Thr	Gln	Ser	Thr	Ala	Thr	Thr	Asn	Ile	Ala
			180				185						190		
Asn	Thr	Glu	Ser	Ser	Gln	Gln	Thr	Leu	Gln	Asn	Ser	Gln	Phe	Leu	Leu
	195					200						205			
Thr	Arg	Leu	Asn	Asp	Pro	Lys	Met	Ser	Glu	Thr	Glu	Arg	Gln	Ser	Met
	210					215					220				
Glu	Ser	Glu	Arg	Ala	Asp	Arg	Ser	Leu	Phe	Val	Gln	Glu	Leu	Leu	Leu
225				230						235				240	
Ser	Thr	Leu	Val	Arg	Glu	Glu	Ser	Ser	Ser	Ser	Asp	Glu	Asp	Asp	Arg
			245					250					255		
Gly	Glu	Met	Ala	Asp	Phe	Gly	Ala	Met	Gly	Cys	Val	Asp	Ile	Met	Pro
		260					265					270			
Leu	Asp	Val	Ala	Leu	Glu	Asn	Leu	Asn	Leu	Lys	Glu	Ser	Asn	Lys	Gly
	275					280						285			
Asn	Glu	Pro	Pro	Pro	Pro	Pro	Leu								
	290					295									

<210> 5595

<211> 1515

<212> DNA

<213> Homo sapiens

<400> 5595  
ntgatccctg gctcagacag ttcagtggga gaatccaaag gccttttccc tccttcctga  
60  
gcctccggga aaggagggag ggatcttggg tccaggggtct cagtaccccc tgtgccattt  
120  
gagctgcttg cgctcatcat ctctattaat aaccaacttc cctcccccac tgccagtgtc  
180  
gccccacgc ctgccagct cgtgttctcc ggtcacagca gctcagtcct ccaaagctgc  
240  
tggaacccag gggagagctg accactgccc gagcagccgg ctgaatccac ctccacaatg  
300  
ccgctctcag gaaccccggc ccctaataag aagaggaaat ccagcaagct gatcatggaa  
360  
ctcactggag gtggacagga gagctcaggg ttgaacctgg gcaaaaagat cagtgtccca  
420  
agggatgtga tgttgaggga actgtcgctg cttaccaacc ggggctccaa gatgttcaaa  
480  
ctgcggcaga tgaggggtgga gaagtttatt tatgagaacc accctgatgt tttctctgac  
540  
agctcaatgg atcacttcca gaagttcctt ccaacagtgg ggggacagct gggcacagct  
600  
ggtcagggat tctcatacag caagagcaac ggcagaggcg gcagccaggc agggggcagt  
660  
ggctctgccg gacagtatgg ctctgatcag cagcaccatc tgggctctgg gtctggagct  
720  
gggggtacag gtggtcccgc gggccaggct ggcagaggag gagctgctgg cacagcaggg  
780  
gttggtgaga caggatcagg agaccaggca ggcggagaag gaaaacatat cactgtgttc  
840  
aagacctata tttcccatg ggagcgagcc atgggggttg acccccagca aaaaatggaa  
900  
cttggcattg acctgctggc ctatggggcc aaagctgaac ttcccaaata taagtccttc  
960  
aacaggacgg caatgcccta tgggtggatat gagaaggcct ccaaacgcat gaccttcag  
1020  
atgcccaagt ttgacctggg gcccttgctg agtgaacccc tggctcctta caacaaaaac  
1080  
ctctccaaca ggcccttctt caatcgaacc cctattccct ggctgagctc tggggagcct  
1140  
gtagactaca acgtggatat tggcatcccc ttggatggag aaacagagga gctgtgaggt  
1200  
gtttcctcct ctgatttgca tcatttcccc tctctggctc caatttggag agggaatgct  
1260  
gagcagatag cccccattgt taatccagta tccttatggg aatggaggga aaaaggagag  
1320  
atctaccttt ccatccttta ctccaagtc cactccacg catccttcct caccaactca  
1380  
gagctcccct tctacttgct ccatatggaa cctgctcgtt tatggaattt gctctgccac  
1440  
cagtaacagt caataaactt caaggaaaat gaactcattc ttcctttgat atttgagagc  
1500  
agatgaaagc cgagg  
1515



<210> 5596  
 <211> 299  
 <212> PRT  
 <213> Homo sapiens

<400> 5596  
 Met Pro Leu Ser Gly Thr Pro Ala Pro Asn Lys Lys Arg Lys Ser Ser  
 1 5 10 15  
 Lys Leu Ile Met Glu Leu Thr Gly Gly Gly Gln Glu Ser Ser Gly Leu  
 20 25 30  
 Asn Leu Gly Lys Lys Ile Ser Val Pro Arg Asp Val Met Leu Glu Glu  
 35 40 45  
 Leu Ser Leu Leu Thr Asn Arg Gly Ser Lys Met Phe Lys Leu Arg Gln  
 50 55 60  
 Met Arg Val Glu Lys Phe Ile Tyr Glu Asn His Pro Asp Val Phe Ser  
 65 70 75 80  
 Asp Ser Ser Met Asp His Phe Gln Lys Phe Leu Pro Thr Val Gly Gly  
 85 90 95  
 Gln Leu Gly Thr Ala Gly Gln Gly Phe Ser Tyr Ser Lys Ser Asn Gly  
 100 105 110  
 Arg Gly Gly Ser Gln Ala Gly Gly Ser Gly Ser Ala Gly Gln Tyr Gly  
 115 120 125  
 Ser Asp Gln Gln His His Leu Gly Ser Gly Ser Gly Ala Gly Gly Thr  
 130 135 140  
 Gly Gly Pro Ala Gly Gln Ala Gly Arg Gly Gly Ala Ala Gly Thr Ala  
 145 150 155 160  
 Gly Val Gly Glu Thr Gly Ser Gly Asp Gln Ala Gly Gly Glu Gly Lys  
 165 170 175  
 His Ile Thr Val Phe Lys Thr Tyr Ile Ser Pro Trp Glu Arg Ala Met  
 180 185 190  
 Gly Val Asp Pro Gln Gln Lys Met Glu Leu Gly Ile Asp Leu Leu Ala  
 195 200 205  
 Tyr Gly Ala Lys Ala Glu Leu Pro Lys Tyr Lys Ser Phe Asn Arg Thr  
 210 215 220  
 Ala Met Pro Tyr Gly Gly Tyr Glu Lys Ala Ser Lys Arg Met Thr Phe  
 225 230 235 240  
 Gln Met Pro Lys Phe Asp Leu Gly Pro Leu Leu Ser Glu Pro Leu Val  
 245 250 255  
 Leu Tyr Asn Gln Asn Leu Ser Asn Arg Pro Ser Phe Asn Arg Thr Pro  
 260 265 270  
 Ile Pro Trp Leu Ser Ser Gly Glu Pro Val Asp Tyr Asn Val Asp Ile  
 275 280 285  
 Gly Ile Pro Leu Asp Gly Glu Thr Glu Glu Leu  
 290 295

<210> 5597  
 <211> 2240  
 <212> DNA  
 <213> Homo sapiens

<400> 5597  
 ctctaattccc ctttcttgac tcttccaagt caggattctc accaaggaag ctatctgcct  
 60

tctttgggaa tgttgggctt atgaagactt gagataatgg ggttcatgta ttcagactct  
120  
ttagcatata cagtagagtt tctaattgtt tcagcattcc ctagtgggcg gttacaagtt  
180  
aggttgggat tctaatacata ttttatgata tctcacagat taaattgcac tttgtctctg  
240  
cccagtcttg attccctttt ggccagcagt ttttaggtct gtcagtactg cactgcaaga  
300  
atggcagatt ttgggatctc tgctggccag tttgtggcag tggctctggga taagtcattc  
360  
ccagtggagg ctctgaaagg tctggtggat aagcttcaag cgttaaccgg caatgagggc  
420  
cgcgtgtctg tggaaaacat caagcagctg ttgcaatctg ccacaaaaga atccagcttt  
480  
gacattattt tgtcaggttt agtcccagga agcaccactc tgcacagtgc tgagattttg  
540  
gctgaaatcg cccggatcct tcggcctggt ggatgtcttt ttctgaagga gccagtagag  
600  
acagctgtag ataacaatag caaagtgaag acagcatcta agctgtgttc agccctgact  
660  
ctttctggtc ttgtggaagt gaaagagctg cagcgggagc ccctaacccc tgaggaagta  
720  
cagtctgttc gagaacacct tggatcatgaa agtgacaacc tgctgtttgt tcagatcaca  
780  
ggcaaaaaac caaactttga agtgggttct tctaggcagc ttaagcttcc catcaccaag  
840  
aagtcttctc cttcagtgaac acctgctgtg gaccctgctg ctgccaagct gtggaccctc  
900  
tcagccaacg atatggagga cgacagcatg gatctcattg actcagatga gctgctggat  
960  
ccagaagatt tgaagaagcc agatccagct tccctgcggg ctgcttcttg tggggaaggg  
1020  
aaaaagagga aggcctgtaa gaactgcacc tgtggccttg ccgaagaact ggaaaaagag  
1080  
aagtcaaggg aacagatgag ctcccaaccc aagtcagctt gtggaaactg ctacctgggc  
1140  
gatgccttcc gctgtgccag ctgcccctac cttgggatgc cagccttcaa acctggggaa  
1200  
aaggtgcttc tgagtgatag caatcttcat gatgcctagg aggttctga catgggaccc  
1260  
atctgctcct ccagccaact cctgtccctc acatcccacc atggtggctc ctcccacctc  
1320  
ctctggattt gttcactctg agatctgttt gcagagtggg tgcttagcag acagagtga  
1380  
gctggctggg gggcacagtg gtgtgtagtg ctgctgtgta tcaaaagacc aaggtattat  
1440  
gggacctggt ttcagaatgg gatgggttcc ttcacctcat gttaagagaa gggagtgtgt  
1500  
cctgaagaag cccttcttct gatgttaaaa tgctgaccag aacgctcttg agcccaggca  
1560  
tcgttgagca ttaacactct gtgacagagc tgcagacccc tgccttgagt ctcatctcag  
1620  
caatgctgcc accctcttgt ctttcagagt tgtagttta ctccattctt tgtgacacga  
1680

gtcaagtggc tcacaacctc ctcagggcac cagaggactc actcactggg tgctgtgatg  
1740  
atatccagtg tccctctgcc cccttccatc cccaaccaca ttgactgta gcattgcac  
1800  
tgtgtcctgt tgtcatttat gttaaccttc aggtattaaa cttgctgcat atcttgacat  
1860  
atcttgagat tctgcatgtc ttgtaaagag aggggatgtg catttggtg tgatgttgga  
1920  
tagtcatcca cgctcagttt ggaccattgg aggaacttag tgtcacgcac aaatggggct  
1980  
attcctacgc ttagaatagg gcttgtctgc ccactttaga agagtccagg ttggtgagca  
2040  
tttagaggga agcagggcag aactctgaac gacaatacgt ctctctgagc agagaccct  
2100  
ttgttcttgt tatccacca tatggacttg gaatcaatct tgccaaatat ttggagagat  
2160  
tgtgtggatt taagagacct ggatttttat atttaccag taaataaaag ttttcattga  
2220  
tatctgtcct tgaaaaaaaa  
2240

&lt;210&gt; 5598

&lt;211&gt; 312

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5598

Met	Ala	Asp	Phe	Gly	Ile	Ser	Ala	Gly	Gln	Phe	Val	Ala	Val	Val	Trp
1				5				10					15		
Asp	Lys	Ser	Ser	Pro	Val	Glu	Ala	Leu	Lys	Gly	Leu	Val	Asp	Lys	Leu
			20					25					30		
Gln	Ala	Leu	Thr	Gly	Asn	Glu	Gly	Arg	Val	Ser	Val	Glu	Asn	Ile	Lys
			35				40					45			
Gln	Leu	Leu	Gln	Ser	Ala	His	Lys	Glu	Ser	Ser	Phe	Asp	Ile	Ile	Leu
			50				55				60				
Ser	Gly	Leu	Val	Pro	Gly	Ser	Thr	Thr	Leu	His	Ser	Ala	Glu	Ile	Leu
65					70					75				80	
Ala	Glu	Ile	Ala	Arg	Ile	Leu	Arg	Pro	Gly	Gly	Cys	Leu	Phe	Leu	Lys
				85				90						95	
Glu	Pro	Val	Glu	Thr	Ala	Val	Asp	Asn	Asn	Ser	Lys	Val	Lys	Thr	Ala
			100					105					110		
Ser	Lys	Leu	Cys	Ser	Ala	Leu	Thr	Leu	Ser	Gly	Leu	Val	Glu	Val	Lys
			115				120						125		
Glu	Leu	Gln	Arg	Glu	Pro	Leu	Thr	Pro	Glu	Glu	Val	Gln	Ser	Val	Arg
			130				135				140				
Glu	His	Leu	Gly	His	Glu	Ser	Asp	Asn	Leu	Leu	Phe	Val	Gln	Ile	Thr
145					150					155				160	
Gly	Lys	Lys	Pro	Asn	Phe	Glu	Val	Gly	Ser	Ser	Arg	Gln	Leu	Lys	Leu
				165				170						175	
Ser	Ile	Thr	Lys	Lys	Ser	Ser	Pro	Ser	Val	Lys	Pro	Ala	Val	Asp	Pro
			180					185					190		
Ala	Ala	Ala	Lys	Leu	Trp	Thr	Leu	Ser	Ala	Asn	Asp	Met	Glu	Asp	Asp
			195				200						205		
Ser	Met	Asp	Leu	Ile	Asp	Ser	Asp	Glu	Leu	Leu	Asp	Pro	Glu	Asp	Leu

210	215	220
Lys Lys Pro Asp Pro Ala Ser Leu Arg Ala Ala Ser Cys Gly Glu Gly		
225	230	235
Lys Lys Arg Lys Ala Cys Lys Asn Cys Thr Cys Gly Leu Ala Glu Glu		240
	245	250
Leu Glu Lys Glu Lys Ser Arg Glu Gln Met Ser Ser Gln Pro Lys Ser		255
	260	265
Ala Cys Gly Asn Cys Tyr Leu Gly Asp Ala Phe Arg Cys Ala Ser Cys		270
	275	280
Pro Tyr Leu Gly Met Pro Ala Phe Lys Pro Gly Glu Lys Val Leu Leu		285
	290	295
Ser Asp Ser Asn Leu His Asp Ala		300
305	310	

&lt;210&gt; 5599

&lt;211&gt; 4492

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5599

```

ttcccgccc cagccaaggc tgctgtttac gtgtcggaca ttcaggagct gtacatccgt
60
gtggttgaca aggtggagat tgggaagaca gtgaaggcat acgtccgcgt gctggacttg
120
cacaagaagc ccttccttgc caaatacttc ccctttatgg acctgaagct ccgagcagcc
180
tccccgatca ttacattggt ggcccttgat gaagcccttg acaactacac catcacattc
240
ctcatccgcg gtgtggccat cggccagacc agtctaactg caagtgtgac caataaagct
300
ggacagagaa tcaactcagc cccacaacag attgaagtct tcccccggt caggctgatg
360
cccaggaagg tgacactgct tatcggggcc acgatgcagg tcacctccga gggcggcccc
420
cagcctcagt ccaacatcct tttctccatc agcaatgaga gcgttgcgct ggtgagcgct
480
gctgggctgg tacagggcct cgccatcggg aacggcactg tgtctgggct cgtgcaggca
540
gtggatgcag agaccggcaa ggtggtcatc atctctcagg acctcgtgca ggtggagggtg
600
ctgctgctaa gggccgtgag gatccgcgcc cccatcatgc ggatgaggac gggcaccag
660
atgcccatct atgtcacgg catcaccaac caccagaacc ctttctcctt tggcaatgcc
720
gtgccaggcc tgaccttcca ctggtctgtc accaagcggg acgtcctgga cctccgaggg
780
cggcaccacg aggcgtcgat ccgactcccg tcacagtaca actttgccat gaacgtgctc
840
ggccgggtaa aaggccggac cgggctgagg gtggtggtca aggctgtgga cccacatcg
900
gggcagctgt atggcctggc cagagaactc tcggatgaga tccaagtcca ggtgtttgag
960
aagctgcagc tgctcaacc tgaaatagaa gcagaacaaa tattaatgtc gcccaactca
1020

```

tatataaagc tgcagacaaa cagggatggc gcagcctctc tgagctaccg cgtcctggat  
1080  
ggacccgaaa aggttccagt tgtgcatgtt gatgagaaag gctttctagc atcagggctt  
1140  
atgatcggga catccaccat cgaagtgatt gcacaagagc cctttggggc caaccaaacc  
1200  
atcattgttg ctgtaaaggt atccctgtt tcctacctga gggtttccat gagccctgtc  
1260  
ctgcacaccc agaacaagga ggccctggcg gccgtgcctt tgggaatgac cgtgaccttc  
1320  
actgtccact tccacgacaa ctctggagat gtcttccatg ctcacagttc ggtcctcaac  
1380  
tttgccacta acagagacga ctttgtgcag atcgggaagg gcccaccaa caacacctgt  
1440  
gttgctcgca cagtcagcgt gggcctgaça ctgctccgtg tgtgggacgc agagcaccgc  
1500  
ggcctctcgg acttcatgcc cctgcctgtc ctacaggcca tctccccaga gctgtctggg  
1560  
gccatgggtg tgggggacgt gctctgtctg gccactgttc tgaccagcct ggaaggcctc  
1620  
tcaggaacct ggagctcctc ggccaacagc atcctccaca tcgaccccaa gacgggtgtg  
1680  
gctgtggccc gggccgtggg atccgtgacg gtttactatg aggtcgctgg gcacctgagg  
1740  
acctacaagg aggtgggtgt cagcgtccct cagaggatca tggcccgta cctccacccc  
1800  
atccagacaa gcttccagga ggctacagcc tccaaagtga ttgttgccgt gggagacaga  
1860  
agctctaacc tgagaggcga gtgcaccccc acccagaggg aagtcatcca ggccttgac  
1920  
ccagagaccc tcatcagctg ccagtcccag ttcaagccgg ccgtctttga ttccccatct  
1980  
caagatgtgt tcaccgtgga gccacagttt gacactgtc tcggccagta cttctgtca  
2040  
atcacaatgc acaggctgac ggacaagcag cggaagcacc tgagcatgaa gaagacagct  
2100  
ctgggtgtca gtgcctccct ctccagcagc cacttctcca cagagcaggt gggggccgag  
2160  
gtgcccttca gccaggtct ctccgcccag caggctgaaa tccttttgag caaccactac  
2220  
accagttccg agatcagggc ctttggtgcc ccggagggtc tggagaactt ggaggtgaaa  
2280  
tccgggtccc cggccgtgct ggcattcgca aaggagaagt cttttgggtg gccagcttc  
2340  
atcacatata cggtcggcgt ctccgacccc gcggctggca gccaagggcc tctgtccact  
2400  
accctgacct tctccagccc cgtgaccaac caagccattg ccatcccagt gacagtggct  
2460  
tttgtgatgg atcgccgtgg gcccggctct tatggagcca gcctcttcca gcacttcctg  
2520  
gattcctacc aggtcatgtt ctacacgtc ttccgacctg tggctgggac agcggtcagt  
2580  
atcatagcct accacactgt ctgcacgccc cgggatcttg ctgtgcctgc agccctcacg  
2640

cctcgagcca gccctggaca cagccccac tatttcgctg cctcatcacc cacatctccc  
2700  
aatgcattgc ctctgctcg caaagccagc cctccctcag ggctgtggag cccagcctat  
2760  
gcctcccact aggccgctg aagggtcccg gaggatgggt ctcagccgag cctcgtgcac  
2820  
ccccaagatg gaacatccct gctgcattca cactggaaca agccctcca gatgagtgcc  
2880  
cgggccccag gccagttca ctgccgtctc ttcacacaga gctgtagttt cggctctgcc  
2940  
cattagctca ttttatgtag gagttttaaa tgtgtgtttt tttcctttca agtcttacia  
3000  
agctaagact ttttggctca ttcctttttg catgggtgtc tagggtttct ggacaatgtg  
3060  
ctgttgcat tttattttcc tagccttgc aaaatctttc ccttctcaag actttgagca  
3120  
gttagaagtg ctcttagaa gttgtctgtg ggtgatgtta ctgtagtgt ctcaggga  
3180  
ggattgtcca gttactttag ggggtttttg gtggggtttt tccccctgtg aaaacttact  
3240  
ttgcccctag tctggctgct gctaggactt ctgaggagca atgggacatg agtgtccctg  
3300  
tatctgcgcc actgccgcaa gggaaacctc aggaaccagc acctggaggc caggatagcc  
3360  
aagccctggg tgagcgagag gctggagaac acaggagctc acccagggtc gctgccaac  
3420  
catgggccac tgtgaacaga cttcagtcct ctgtttttgt ttcataagcc gttgagacat  
3480  
ctgatggact tggcttaggc cctgctggga catcccacgt gtgatccctt tcaactccatc  
3540  
aggacaccag gactgtcctt aggaatatgt ccttgagatg gcagcaggag tcatattttc  
3600  
tgtgtgtgtg tttcggaag ccgctgtgtc ctgcctcagc acaaagacc agtgtcattt  
3660  
gctcctctg ttcctgtgcc actccagaac ctcagcagat ctgagccacc gcctgccagt  
3720  
gtgagaggcg gccactttca tggcagctca tcaggcgagc ggccccagac agcttcccag  
3780  
caggccctag agcccggcct gggccaatga tggagggcgg ccaccagccc agggcctgcc  
3840  
catccagaag ggactcccca gggcctgggg gaggagacc ttggaaaagt cctctcttcc  
3900  
cagctcctga ttctggatct gagatttca gatcacaggc ccctgtgtc caggccgagg  
3960  
ctgggctacc ctcagggaga tccagagact catgcccctg gccatccatg cgtggacgt  
4020  
gtgtggagag tccaggatga cgggatcccg cacaagctcc cttcagtcct tcagggtgg  
4080  
gccatgtgtg tgatttttct aaagctggag aaaggaagaa ttgtgccttg catattactt  
4140  
gagcttaaac tgacaacctg gatgtaaata ggagcctttc tactggttta ttaataaag  
4200  
ttctatgtgc cagtggcttt tgtggtggat cgccgtgggc ccggtcctta tggagccagc  
4260

ctcttccagc acttctctgga ttctaccag gtcattgttct tcacgtctctt cgccctgttg  
4320  
gctgggacag cggatcatgat catagcctac cacactgtct gcagctttat atatgagttg  
4380  
ggcgacatta atatttgttc tgcttctatt tcagggttga gcagctgcag cttctcaaac  
4440  
acctggactt ggatctcatc cgagagttct ctggccaggc catacagctg gc  
4492

<210> 5600

<211> 923

<212> PRT

<213> Homo sapiens

<400> 5600

Phe	Pro	Ala	Pro	Ala	Lys	Ala	Val	Val	Tyr	Val	Ser	Asp	Ile	Gln	Glu
1				5					10					15	
Leu	Tyr	Ile	Arg	Val	Val	Asp	Lys	Val	Glu	Ile	Gly	Lys	Thr	Val	Lys
			20					25					30		
Ala	Tyr	Val	Arg	Val	Leu	Asp	Leu	His	Lys	Lys	Pro	Phe	Leu	Ala	Lys
			35					40					45		
Tyr	Phe	Pro	Phe	Met	Asp	Leu	Lys	Leu	Arg	Ala	Ala	Ser	Pro	Ile	Ile
			50				55					60			
Thr	Leu	Val	Ala	Leu	Asp	Glu	Ala	Leu	Asp	Asn	Tyr	Thr	Ile	Thr	Phe
65					70					75					80
Leu	Ile	Arg	Gly	Val	Ala	Ile	Gly	Gln	Thr	Ser	Leu	Thr	Ala	Ser	Val
				85					90					95	
Thr	Asn	Lys	Ala	Gly	Gln	Arg	Ile	Asn	Ser	Ala	Pro	Gln	Gln	Ile	Glu
			100					105					110		
Val	Phe	Pro	Pro	Phe	Arg	Leu	Met	Pro	Arg	Lys	Val	Thr	Leu	Leu	Ile
			115				120					125			
Gly	Ala	Thr	Met	Gln	Val	Thr	Ser	Glu	Gly	Gly	Pro	Gln	Pro	Gln	Ser
			130				135				140				
Asn	Ile	Leu	Phe	Ser	Ile	Ser	Asn	Glu	Ser	Val	Ala	Leu	Val	Ser	Ala
145					150					155					160
Ala	Gly	Leu	Val	Gln	Gly	Leu	Ala	Ile	Gly	Asn	Gly	Thr	Val	Ser	Gly
				165					170					175	
Leu	Val	Gln	Ala	Val	Asp	Ala	Glu	Thr	Gly	Lys	Val	Val	Ile	Ile	Ser
			180					185					190		
Gln	Asp	Leu	Val	Gln	Val	Glu	Val	Leu	Leu	Leu	Arg	Ala	Val	Arg	Ile
			195				200					205			
Arg	Ala	Pro	Ile	Met	Arg	Met	Arg	Thr	Gly	Thr	Gln	Met	Pro	Ile	Tyr
			210				215					220			
Val	Thr	Gly	Ile	Thr	Asn	His	Gln	Asn	Pro	Phe	Ser	Phe	Gly	Asn	Ala
225					230					235					240
Val	Pro	Gly	Leu	Thr	Phe	His	Trp	Ser	Val	Thr	Lys	Arg	Asp	Val	Leu
				245					250					255	
Asp	Leu	Arg	Gly	Arg	His	His	Glu	Ala	Ser	Ile	Arg	Leu	Pro	Ser	Gln
			260					265					270		
Tyr	Asn	Phe	Ala	Met	Asn	Val	Leu	Gly	Arg	Val	Lys	Gly	Arg	Thr	Gly
			275					280					285		
Leu	Arg	Val	Val	Val	Lys	Ala	Val	Asp	Pro	Thr	Ser	Gly	Gln	Leu	Tyr
			290				295					300			
Gly	Leu	Ala	Arg	Glu	Leu	Ser	Asp	Glu	Ile	Gln	Val	Gln	Val	Phe	Glu

305 310 315 320  
Lys Leu Gln Leu Leu Asn Pro Glu Ile Glu Ala Glu Gln Ile Leu Met  
325 330 335  
Ser Pro Asn Ser Tyr Ile Lys Leu Gln Thr Asn Arg Asp Gly Ala Ala  
340 345 350  
Ser Leu Ser Tyr Arg Val Leu Asp Gly Pro Glu Lys Val Pro Val Val  
355 360 365  
His Val Asp Glu Lys Gly Phe Leu Ala Ser Gly Ser Met Ile Gly Thr  
370 375 380  
Ser Thr Ile Glu Val Ile Ala Gln Glu Pro Phe Gly Ala Asn Gln Thr  
385 390 395 400  
Ile Ile Val Ala Val Lys Val Ser Pro Val Ser Tyr Leu Arg Val Ser  
405 410 415  
Met Ser Pro Val Leu His Thr Gln Asn Lys Glu Ala Leu Val Ala Val  
420 425 430  
Pro Leu Gly Met Thr Val Thr Phe Thr Val His Phe His Asp Asn Ser  
435 440 445  
Gly Asp Val Phe His Ala His Ser Ser Val Leu Asn Phe Ala Thr Asn  
450 455 460  
Arg Asp Asp Phe Val Gln Ile Gly Lys Gly Pro Thr Asn Asn Thr Cys  
465 470 475 480  
Val Val Arg Thr Val Ser Val Gly Leu Thr Leu Leu Arg Val Trp Asp  
485 490 495  
Ala Glu His Pro Gly Leu Ser Asp Phe Met Pro Leu Pro Val Leu Gln  
500 505 510  
Ala Ile Ser Pro Glu Leu Ser Gly Ala Met Val Val Gly Asp Val Leu  
515 520 525  
Cys Leu Ala Thr Val Leu Thr Ser Leu Glu Gly Leu Ser Gly Thr Trp  
530 535 540  
Ser Ser Ser Ala Asn Ser Ile Leu His Ile Asp Pro Lys Thr Gly Val  
545 550 555 560  
Ala Val Ala Arg Ala Val Gly Ser Val Thr Val Tyr Tyr Glu Val Ala  
565 570 575  
Gly His Leu Arg Thr Tyr Lys Glu Val Val Val Ser Val Pro Gln Arg  
580 585 590  
Ile Met Ala Arg His Leu His Pro Ile Gln Thr Ser Phe Gln Glu Ala  
595 600 605  
Thr Ala Ser Lys Val Ile Val Ala Val Gly Asp Arg Ser Ser Asn Leu  
610 615 620  
Arg Gly Glu Cys Thr Pro Thr Gln Arg Glu Val Ile Gln Ala Leu His  
625 630 635 640  
Pro Glu Thr Leu Ile Ser Cys Gln Ser Gln Phe Lys Pro Ala Val Phe  
645 650 655  
Asp Phe Pro Ser Gln Asp Val Phe Thr Val Glu Pro Gln Phe Asp Thr  
660 665 670  
Ala Leu Gly Gln Tyr Phe Cys Ser Ile Thr Met His Arg Leu Thr Asp  
675 680 685  
Lys Gln Arg Lys His Leu Ser Met Lys Lys Thr Ala Leu Val Val Ser  
690 695 700  
Ala Ser Leu Ser Ser Ser His Phe Ser Thr Glu Gln Val Gly Ala Glu  
705 710 715 720  
Val Pro Phe Ser Pro Gly Leu Phe Ala Asp Gln Ala Glu Ile Leu Leu  
725 730 735  
Ser Asn His Tyr Thr Ser Ser Glu Ile Arg Val Phe Gly Ala Pro Glu



740						745						750					
Val	Leu	Glu	Asn	Leu	Glu	Val	Lys	Ser	Gly	Ser	Pro	Ala	Val	Leu	Ala		
755						760						765					
Phe	Ala	Lys	Glu	Lys	Ser	Phe	Gly	Trp	Pro	Ser	Phe	Ile	Thr	Tyr	Thr		
770						775						780					
Val	Gly	Val	Ser	Asp	Pro	Ala	Ala	Gly	Ser	Gln	Gly	Pro	Leu	Ser	Thr		
785						790						795					
Thr	Leu	Thr	Phe	Ser	Ser	Pro	Val	Thr	Asn	Gln	Ala	Ile	Ala	Ile	Pro		
805						810						815					
Val	Thr	Val	Ala	Phe	Val	Met	Asp	Arg	Arg	Gly	Pro	Gly	Pro	Tyr	Gly		
820						825						830					
Ala	Ser	Leu	Phe	Gln	His	Phe	Leu	Asp	Ser	Tyr	Gln	Val	Met	Phe	Phe		
835						840						845					
Thr	Leu	Phe	Ala	Leu	Leu	Ala	Gly	Thr	Ala	Val	Met	Ile	Ile	Ala	Tyr		
850						855						860					
His	Thr	Val	Cys	Thr	Pro	Arg	Asp	Leu	Ala	Val	Pro	Ala	Ala	Leu	Thr		
865						870						875					
Pro	Arg	Ala	Ser	Pro	Gly	His	Ser	Pro	His	Tyr	Phe	Ala	Ala	Ser	Ser		
885						890						895					
Pro	Thr	Ser	Pro	Asn	Ala	Leu	Pro	Pro	Ala	Arg	Lys	Ala	Ser	Pro	Pro		
900						905						910					
Ser	Gly	Leu	Trp	Ser	Pro	Ala	Tyr	Ala	Ser	His							
915						920											

```
<210> 5601
<211> 670
<212> DNA
<213> Homo sapiens
```

```

<400> 5601
ggccgtaact gctgccatct tctccgcgct atggctgcgt tcggccgtca ggtccttgat
60
tggcaccgcc tgatccccct cacctggggc tgtatggcta ggcagactcg tcatcttgga
120
gaacagagaa ggacgacagc ttctttgttg cgaaactga ctacagcctc caatggaggg
180
gtcattgagg agttatcttg tgttagatcc aataactatg tgcaggaacc agagtgcagg
240
aggaatcttg ttcagtgcct ccttgagaag cagggggactc ctgtggtaca agggtccttg
300
gagctagaga gggtcatgag ttccctcctg gacatgggtt tcagcaatgc ccatattaat
360
gaattgctca gtgtacggcg aggtgccagt cttcaacagt tgctggacat catttcagaa
420
tttattctct tgggtctgaa tccagagcct gtgtgtgtgg tcttgaagaa aagtccccag
480
ttattgaaac tgcctattat gcaaattgagg aagcgctcca gttacctgca aaagcttggg
540
cttggaagaag ggaaattaaa gaggggtgctt tactgttgcc ctgaaatttt caccatgcgc
600
cagcaggaca ttaacgacac tgtcaggctt ctcaaggaga agtgcctttt cacgggtacc
660
cttcacgcgt
670

```

<210> 5602  
<211> 213  
<212> PRT  
<213> Homo sapiens

<400> 5602  
Met Ala Ala Phe Gly Arg Gln Val Leu Asp Trp His Arg Leu Ile Pro  
1 5 10 15  
Leu Thr Trp Ala Cys Met Ala Arg Gln Thr Arg His Leu Gly Glu Gln  
20 25 30  
Arg Arg Thr Thr Ala Ser Leu Leu Arg Lys Leu Thr Thr Ala Ser Asn  
35 40 45  
Gly Gly Val Ile Glu Glu Leu Ser Cys Val Arg Ser Asn Asn Tyr Val  
50 55 60  
Gln Glu Pro Glu Cys Arg Arg Asn Leu Val Gln Cys Leu Leu Glu Lys  
65 70 75 80  
Gln Gly Thr Pro Val Val Gln Gly Ser Leu Glu Leu Glu Arg Val Met  
85 90 95  
Ser Ser Leu Leu Asp Met Gly Phe Ser Asn Ala His Ile Asn Glu Leu  
100 105 110  
Leu Ser Val Arg Arg Gly Ala Ser Leu Gln Gln Leu Leu Asp Ile Ile  
115 120 125  
Ser Glu Phe Ile Leu Leu Gly Leu Asn Pro Glu Pro Val Cys Val Val  
130 135 140  
Leu Lys Lys Ser Pro Gln Leu Leu Lys Leu Pro Ile Met Gln Met Arg  
145 150 155 160  
Lys Arg Ser Ser Tyr Leu Gln Lys Leu Gly Leu Gly Glu Gly Lys Leu  
165 170 175  
Lys Arg Val Leu Tyr Cys Cys Pro Glu Ile Phe Thr Met Arg Gln Gln  
180 185 190  
Asp Ile Asn Asp Thr Val Arg Leu Leu Lys Glu Lys Cys Leu Phe Thr  
195 200 205  
Val Pro Leu His Ala  
210

<210> 5603  
<211> 2070  
<212> DNA  
<213> Homo sapiens

<400> 5603  
ngcttctagg ccttctcagt agatggagct aagtaataata tgtatatata ctaaccacaca  
60  
gatataaata tgtctataat tatttctata tttatccatt cgtgtatatg ttaagataaa  
120  
catgatggag acccttcaaa tttgcttatg ttctttttca gcctatagac cagatataat  
180  
aattagcttt tcttctcttg cagattccag agagtccctc atttcatatg tgccttccag  
240  
aacatctctt gtggtattca ctacttggct tctgtgttca tgggagtcac ccctcatcat  
300  
gtctgcaggc ccccaggcaa tgtgagtcag gttgttttcc ataatcactc taattggagt  
360

ttggaggaca ccggggccct gttgtcttca ggccagaaag attatgttac ggtgcagttg  
420  
cagaatggtg agatctggga gctctcaagg tgtagcagga ataagaggga gaacacatcg  
480  
agtttgggct atgaatacac tggcagtaag aaagagtttc cttgtgtgga tggctacata  
540  
tatgaccaga acacatggaa aagcactgcg gtgaccaggt ggaacctggt ctgtgaccga  
600  
aaatggcttg caatgctgat ccagccccta tttatgtttg gagtctact gggatcggtg  
660  
acttttggct acttttctga caggctagga cgccgggtgg tcttgtgggc cacaagcagt  
720  
agcatgtttt tgtttggaat agcagcgcg tttgcagttg attattacac cttcatggct  
780  
gctcgctttt ttcttgccat ggttgcaagt ggctatcttg tggtggggtt tgtctatgtg  
840  
atggaattca ttggcatgaa gtctcggaca tgggcgtctg tccatttgca ttcctttttt  
900  
gcagttggaa ccctgctggt ggctttgaca ggatacttgg tcaggacctg gtggctttac  
960  
cagatgatcc tctccacagt gactgtcccc tttatcctgt gctgttgggt gctcccagag  
1020  
acaccttttt ggcttctctc agagggacga tatgaagaag cacaaaaaat agttgacatc  
1080  
atggccaagt ggaacagggc aagctcctgt aaactgtcag aacttttate actggaccta  
1140  
caaggtcctg ttagtaatag cccactgaa gttcagaagc acaacctatc atatctgttt  
1200  
tataactgga gcattacgaa aaggacactt accgtttggc taatctggtt cactggaagt  
1260  
ttgggattct actcgtttct cttgaattct gttaacttag gaggcaatga atacttaaac  
1320  
ctcttctctc tgggtgtagt ggaaattccc gcctacacct tcgtgtgcat cgccatggac  
1380  
aaggtcggga ggagaacagt cctggcctac tctcttttct gcagtgcact ggctgtggt  
1440  
gtcgttatgg tgatccccca gaaacattat attttgggtg tggtgacagc tatggttggga  
1500  
aaatttgcca tcggggcagc atttggcctc atttatcttt atacagctga gctgtatcca  
1560  
accattgtaa gatcgctggc tgtgggaagc ggcagcatgg tgtgtgcct ggccagcatc  
1620  
ctggcgccgt tctctgtgga cctcagcagc atttggatct tcataccaca gttgtttgtt  
1680  
gggactatgg cctcctgag tggagtgtta acactaaagc ttccagaaac ccttgggaaa  
1740  
cggctagcaa ctacttggga ggaggctgca aaactggagt cagagaatga aagcaagtca  
1800  
agcaaattac ttctcacaac taataatagt gggctggaaa aaacggaagc gattaccccc  
1860  
agggattctg gtcttgggtg ataaatgtgc catgcctgct gtctagcacc tgaaatatta  
1920  
tttaccctaa tgcctttgta ttagaggaat cttattctca tctcccatat gttgtttgta  
1980

tgtcttttta ataaattttg taagaaaatt ttaaagcaaa tatgttataa aagaaataaa  
 2040  
 aactaagatg aaaattctca gttttaaaaa  
 2070

<210> 5604  
 <211> 560  
 <212> PRT  
 <213> Homo sapiens

<400> 5604  
 Arg Phe Gln Arg Val Leu Tyr Phe Ile Cys Ala Phe Gln Asn Ile Ser  
 1 5 10 15  
 Cys Gly Ile His Tyr Leu Ala Ser Val Phe Met Gly Val Thr Pro His  
 20 25 30  
 His Val Cys Arg Pro Pro Gly Asn Val Ser Gln Val Val Phe His Asn  
 35 40 45  
 His Ser Asn Trp Ser Leu Glu Asp Thr Gly Ala Leu Leu Ser Ser Gly  
 50 55 60  
 Gln Lys Asp Tyr Val Thr Val Gln Leu Gln Asn Gly Glu Ile Trp Glu  
 65 70 75 80  
 Leu Ser Arg Cys Ser Arg Asn Lys Arg Glu Asn Thr Ser Ser Leu Gly  
 85 90 95  
 Tyr Glu Tyr Thr Gly Ser Lys Lys Glu Phe Pro Cys Val Asp Gly Tyr  
 100 105 110  
 Ile Tyr Asp Gln Asn Thr Trp Lys Ser Thr Ala Val Thr Gln Trp Asn  
 115 120 125  
 Leu Val Cys Asp Arg Lys Trp Leu Ala Met Leu Ile Gln Pro Leu Phe  
 130 135 140  
 Met Phe Gly Val Leu Leu Gly Ser Val Thr Phe Gly Tyr Phe Ser Asp  
 145 150 155 160  
 Arg Leu Gly Arg Arg Val Val Leu Trp Ala Thr Ser Ser Ser Met Phe  
 165 170 175  
 Leu Phe Gly Ile Ala Ala Ala Phe Ala Val Asp Tyr Tyr Thr Phe Met  
 180 185 190  
 Ala Ala Arg Phe Phe Leu Ala Met Val Ala Ser Gly Tyr Leu Val Val  
 195 200 205  
 Gly Phe Val Tyr Val Met Glu Phe Ile Gly Met Lys Ser Arg Thr Trp  
 210 215 220  
 Ala Ser Val His Leu His Ser Phe Phe Ala Val Gly Thr Leu Leu Val  
 225 230 235 240  
 Ala Leu Thr Gly Tyr Leu Val Arg Thr Trp Trp Leu Tyr Gln Met Ile  
 245 250 255  
 Leu Ser Thr Val Thr Val Pro Phe Ile Leu Cys Cys Trp Val Leu Pro  
 260 265 270  
 Glu Thr Pro Phe Trp Leu Leu Ser Glu Gly Arg Tyr Glu Glu Ala Gln  
 275 280 285  
 Lys Ile Val Asp Ile Met Ala Lys Trp Asn Arg Ala Ser Ser Cys Lys  
 290 295 300  
 Leu Ser Glu Leu Leu Ser Leu Asp Leu Gln Gly Pro Val Ser Asn Ser  
 305 310 315 320  
 Pro Thr Glu Val Gln Lys His Asn Leu Ser Tyr Leu Phe Tyr Asn Trp  
 325 330 335  
 Ser Ile Thr Lys Arg Thr Leu Thr Val Trp Leu Ile Trp Phe Thr Gly

340 345 350  
Ser Leu Gly Phe Tyr Ser Phe Ser Leu Asn Ser Val Asn Leu Gly Gly  
355 360 365  
Asn Glu Tyr Leu Asn Leu Phe Leu Leu Gly Val Val Glu Ile Pro Ala  
370 375 380  
Tyr Thr Phe Val Cys Ile Ala Met Asp Lys Val Gly Arg Arg Thr Val  
385 390 395 400  
Leu Ala Tyr Ser Leu Phe Cys Ser Ala Leu Ala Cys Gly Val Val Met  
405 410 415  
Val Ile Pro Gln Lys His Tyr Ile Leu Gly Val Val Thr Ala Met Val  
420 425 430  
Gly Lys Phe Ala Ile Gly Ala Ala Phe Gly Leu Ile Tyr Leu Tyr Thr  
435 440 445  
Ala Glu Leu Tyr Pro Thr Ile Val Arg Ser Leu Ala Val Gly Ser Gly  
450 455 460  
Ser Met Val Cys Arg Leu Ala Ser Ile Leu Ala Pro Phe Ser Val Asp  
465 470 475 480  
Leu Ser Ser Ile Trp Ile Phe Ile Pro Gln Leu Phe Val Gly Thr Met  
485 490 495  
Ala Leu Leu Ser Gly Val Leu Thr Leu Lys Leu Pro Glu Thr Leu Gly  
500 505 510  
Lys Arg Leu Ala Thr Thr Trp Glu Glu Ala Ala Lys Leu Glu Ser Glu  
515 520 525  
Asn Glu Ser Lys Ser Ser Lys Leu Leu Leu Thr Thr Asn Asn Ser Gly  
530 535 540  
Leu Glu Lys Thr Glu Ala Ile Thr Pro Arg Asp Ser Gly Leu Gly Glu  
545 550 555 560

&lt;210&gt; 5605

&lt;211&gt; 376

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5605

acgcgtgaag gggaactgat gataaacaca aaaggcaatg ttagatggcg ccaggcactg  
60cgagggagac aactgggtc ttggggtaga gcggaagag gtggtagtga cttcttcagt  
120catccaggga ggcctctcca gggaggatga cggaacatca gaggaagaa gcaaggagaa  
180ccagccacac tcagagctgg gaaagagcag caggaagatg ggggcagtga gtgccagggc  
240tctgcaggga tgggcttgcc tggcaggag caataccaag gaagttagta gggcccgggt  
300catgccacgg cctttaggc agaaccctta agtctcttg tagggacccc tttggtctcc  
360

cctttgaact acgccc

376

&lt;210&gt; 5606

&lt;211&gt; 101

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5606

Met Thr Arg Ala Leu Leu Thr Ser Leu Val Leu Leu Pro Ala Arg Gln  
1 5 10 15  
Ala His Pro Cys Arg Ala Leu Ala Leu Thr Ala Pro Ile Phe Leu Leu  
20 25 30  
Leu Phe Pro Ser Ser Glu Cys Gly Trp Phe Ser Leu Leu Leu Ser Ser  
35 40 45  
Asp Val Pro Ser Ser Ser Leu Glu Arg Pro Pro Trp Met Thr Glu Glu  
50 55 60  
Val Thr Thr Thr Ser Ser Arg Ser Thr Pro Arg Pro Ser Val Ser Pro  
65 70 75 80  
Ser Gln Cys Leu Ala Pro Ser Asn Ile Ala Phe Cys Val Tyr His Gln  
85 90 95  
Phe Pro Phe Thr Arg  
100

&lt;210&gt; 5607

&lt;211&gt; 320

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5607

gtgcacacgc gaggtatagg ctccagactc ctcaccaaga tgggctatga gtttggcaag  
60  
ggtttggggcc gacacgcgga aggccgggtg gagcccatcc atgctgtggt gttgcctcga  
120  
gggaagtcgc tggaccagtg tgtggagacc ctgcagaagc agaccagggt tggcaaggct  
180  
ggcaccaaca agccccccag gtgccgggga agagggggcca ggcctggggg ccgcccagct  
240  
cctcggaatg tgtttgactt cctcaatgaa aagctgcaag gtcaggctcc tggggcccta  
300  
caagccgggc ggcctcagca  
320

&lt;210&gt; 5608

&lt;211&gt; 106

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5608

Val His Thr Arg Gly Ile Gly Ser Arg Leu Leu Thr Lys Met Gly Tyr  
1 5 10 15  
Glu Phe Gly Lys Gly Leu Gly Arg His Ala Glu Gly Arg Val Glu Pro  
20 25 30  
Ile His Ala Val Val Leu Pro Arg Gly Lys Ser Leu Asp Gln Cys Val  
35 40 45  
Glu Thr Leu Gln Lys Gln Thr Arg Val Gly Lys Ala Gly Thr Asn Lys  
50 55 60  
Pro Pro Arg Cys Arg Gly Arg Gly Ala Arg Pro Gly Gly Arg Pro Ala  
65 70 75 80  
Pro Arg Asn Val Phe Asp Phe Leu Asn Glu Lys Leu Gln Gly Gln Ala  
85 90 95  
Pro Gly Ala Leu Gln Ala Gly Arg Pro Gln

100

105

<210> 5609  
<211> 1843  
<212> DNA  
<213> Homo sapiens

<400> 5609  
tttttttttt tttttttttt aagcaatttt ttccctttat tatttttggt aaataagatt  
60  
ccagaaagta tagtgcaaac actcagtaga aaagttgcaa ttaagaaatg tacattcaca  
120  
tttaacattt cagtccattc acttttttta aaataaaaat aggacaaatt attcaattac  
180  
ttgtctcaat ttaacaatct tgaaaaagac tggaaggtag cctacagtgt tcagttgaca  
240  
taaaaataga cccgtattga tcatacaaat ctatcatgag aagttacca gtgagagtga  
300  
gttattgtaa ttctgaatgt actcatcgtg tttctcactt ctacagaagc atcctcagt  
360  
agttgtattg tgcgagaaaa tgacaccctt gccacatca ctctccattc catagaggga  
420  
cacaacccta tctagccaaa ccagaagaa cgcaggcgct tacacaactt ttctcggaca  
480  
gtcgagaaaa tccaaaagtg ggctttgggc ttacctaaa taggaatgga atgtaccact  
540  
acgagatggt catcataata aggacattgt tgtttgagcg gggggtgtgc aatcagtata  
600  
aatgaggatg gcggaggaag aggagtgggt actgaaggga ggtggtgcat aataagtga  
660  
cgagctacac aaagctcgag ctacacaaag ctcaggctcc acgggcctcg ccttggtcc  
720  
cagggatgct ctgcagccag cgggcggatg acctgaggtc gggcctgggc ctgtcccttt  
780  
gtgcatgcgg cgtgatttca aattcaaact aagttccaca ccattaggag ttttcacggc  
840  
atgcagttcc agagtgc aaa tggcttgcat atgtgcagtt tttacaggtg gaaggcaaga  
900  
ccatacatct ctccacact gggcgtgcct cctagtggac agttgtatgc aagaggcgg  
960  
gatgggctcc ctccagatcc cccaatgtgg gaatggctcc ctgagacttg tgcttcgtgt  
1020  
gcctggggcc cagagttggg tgggggggtg ctgggtgggag gtgagaaaca agttctggct  
1080  
gccgtcgggc cagcttccca ctgccctcac ctgggaggtg gatgccaca ggcaggatgc  
1140  
tctgggctac tgttgcacag tctgcacga gatatttatt cagccacaa gatttaatag  
1200  
atctcttggg agttcatcta ggctattatg tctgtttaaa cattaattct caataagtgc  
1260  
ctgaaagctc ttttgaaagc aacctatttg aaggtctgaa ccgcccggta ccagcaggaa  
1320  
ccaatgccca ggagagggtc agagcacatg tgctctgggt gttgtcaaat ctctcaccat  
1380

4792

ccatcataag ccctctgaac tcctgctgaa atcggccctt tgaacatect ctaaccctg  
1440  
ggaaggcacc eggaccacc ttacctcac cagcagcata tgacaataac attaaatggc  
1500  
tctacagcag aggaagatga aagtaaaagt agcaaataca accaatggcc ttcccatagc  
1560  
tcacagaact cctgagcaga agctgagcag ggaagaaatg gtgtgtagtt tcagggtgtc  
1620  
tggaggtgcc accatttctc cccatttgat gtcagagagg ctttacaaaa aaataaggca  
1680  
acagctctta aggagattct gtatatgtga aattagacgc aatgacaggt ttcgctccca  
1740  
aantatagtt ttagaatata gtctgatatg acaaagtagg gatttttaaa gcctaacatt  
1800  
ttatttcctt gctggggatc agttagtaaa gaaggaggaa ttc  
1843

<210> 5610  
<211> 153  
<212> PRT  
<213> Homo sapiens

<400> 5610  
Met Arg Arg Asp Phe Lys Phe Lys Leu Ser Ser Thr Pro Leu Gly Val  
1 5 10 15  
Phe Thr Ala Cys Ser Ser Arg Val Gln Met Ala Cys Ile Cys Ala Val  
20 25 30  
Phe Thr Gly Gly Arg Gln Asp His Thr Ser Leu Pro His Trp Ala Cys  
35 40 45  
Leu Leu Val Asp Ser Cys Met Gln Glu Ala Val Met Gly Ser Leu Arg  
50 55 60  
Ile Pro Gln Cys Gly Asn Gly Pro Leu Arg Leu Val Leu Arg Val Pro  
65 70 75 80  
Gly Ala Gln Ser Trp Val Gly Gly Cys Trp Trp Glu Val Arg Asn Lys  
85 90 95  
Phe Trp Leu Pro Ser Gly Gln Leu Pro Thr Ala Leu Thr Trp Glu Val  
100 105 110  
Asp Ala His Arg Gln Asp Ala Leu Gly Tyr Cys Cys Thr Val Leu His  
115 120 125  
Glu Ile Phe Ile Gln Pro Thr Arg Phe Asn Arg Ser Leu Gly Ser Ser  
130 135 140  
Ser Arg Leu Leu Cys Leu Phe Lys His  
145 150

<210> 5611  
<211> 1152  
<212> DNA  
<213> Homo sapiens

<400> 5611  
ngggccgctc cctcccggaac tcccggcctc ccggcctccc tggccccgcc tgggaagggg  
60  
tgcaaggaag cctccggcg ctgcgtccg aggcgggaga cagcgcccc ctccgccct  
120



cgggtcctgg cgcctcagag cccggcccag gccgcggaac ggtgatgctc gggccggacg  
 180  
 ggcgagcgcg gatccctgcg tcccgtgaa aatgtgtgtc tgacatgcaa gtcagtggg  
 240  
 gcagagaccc gtggattgct gtgccctgcc ctccggacct ggatcatgaa ggtgttggga  
 300  
 agaagcttct tctgggtgct gtttcccgtc cttccctggg cgggtgcaggc tgtggagcac  
 360  
 gaggaggtgg cgcagcgtgt gatcaaaactg caccgcgggc gaggggtggc tgccatgcag  
 420  
 agccggcagt ggggtccggga cagctgcagg aagctctcag ggcttctccg ccagaagaat  
 480  
 gcagttctga acaaactgaa aactgcaatt ggagcagtgg agaaagacgt gggcctgtcg  
 540  
 gatgaagaga aactgtttca ggtgcacacg tttgaaattt tccagaaaga gctgaatgaa  
 600  
 agtgaaaatt ccgtttttcca agctgtctac ggactgcaga gagccctgca gggggattac  
 660  
 aaagatgtcg tgaacatgaa ggagagcagc cggcagcgcc tggaggccct gagagaggct  
 720  
 gcaataaagg aagaaacaga atatattggaa cttctggcag cagaaaaaca tcaagttgaa  
 780  
 gcccttaaaa atatgcaaca tcaaaaccaa agtttatcca tgcttgacga gattcttgaa  
 840  
 gatgtaagaa aggcagcgga tcgtctggag gaagagatag aggaacatgc ttttgacgac  
 900  
 aataaatcag tcaagggggg caattttgag gcagttctga ggggtggagga agaagaggcc  
 960  
 aattctaagc aaaatataac aaaacgagaa gtggaggatg acttggttct tagcatgctg  
 1020  
 attgactccc agaacaacca gtatatatttg accaagccca gagattcaac catcccacgt  
 1080  
 gcagatcacc actttataaa ggacattgtt accataggaa tgctgtcttt gccttgtggc  
 1140  
 tggcgatgta ca  
 1152

<210> 5612

<211> 289

<212> PRT

<213> Homo sapiens

<400> 5612

Met	Lys	Val	Leu	Gly	Arg	Ser	Phe	Phe	Trp	Val	Leu	Phe	Pro	Val	Leu
1				5					10					15	
Pro	Trp	Ala	Val	Gln	Ala	Val	Glu	His	Glu	Glu	Val	Ala	Gln	Arg	Val
			20					25					30		
Ile	Lys	Leu	His	Arg	Gly	Arg	Gly	Val	Ala	Ala	Met	Gln	Ser	Arg	Gln
		35				40					45				
Trp	Val	Arg	Asp	Ser	Cys	Arg	Lys	Leu	Ser	Gly	Leu	Leu	Arg	Gln	Lys
	50				55				60						
Asn	Ala	Val	Leu	Asn	Lys	Leu	Lys	Thr	Ala	Ile	Gly	Ala	Val	Glu	Lys
65				70					75					80	
Asp	Val	Gly	Leu	Ser	Asp	Glu	Glu	Lys	Leu	Phe	Gln	Val	His	Thr	Phe

[illegible]

```
<210> 5613
<211> 1679
<212> DNA
<213> Homo sapiens
```

```

<400> 5613
ggctaaggct gcatcccagg tgagttcccc cccccgtac cccggagggt ttgttggtga
60
gggttccggg gagcggcctg gagagagggt gaggcgaagt ctagtttcgc ttcagggagg
120
ctcagaccct gtgggggtcaa gtcggcggtg gaggccctag gctcagcctg tggggaccgg
180
cgggggactcg gcctgggcag tcctgggaga agctgagccg gctctgcctg aagccagttc
240
tccttgctgc aggtgctggt ggacagcgcg gaggaggggt ccctcgctgc ggcggcggag
300
ctggccgctc agaagcgcg aacagagactg cgcaaattcc gggagctgca cctgatgcgg
360
aatgaagctc gtaaattaaa tcaccaggaa gttgtggaag aagataaaaag actaaaatta
420
cctgcaaaatt gggaagccaa aaaagctcgt ttggagtggg aactaaagga agaggaaaag
480
aaaaaggaat gtgcggcaag aggagaagac tatgagaaaag tgaagttgct ggagatcagt
540
gcagaagatg cagaaagatg ggagaggaaa aagaagagga aaaaccctga tctgggattt
600

```

tcagattatg ctgctgccca gttacgccag tatcatcggt tgaccaagca gatcaaacct  
 660  
 gacatggaaa catatgagag actgagagaa aaacatggag aagagttttt cccaacatcc  
 720  
 aatagtcttc ttcatggaac acatgtgcct tccacagagg aaattgacag gatggtcata  
 780  
 gatctggaaa aacagattga aaaacgagac aaatatagcc ggagacgtcc ttataatgat  
 840  
 gatgcagata tcgactacat taatgaaagg aatgccaaat tcaacaagaa agctgaaaga  
 900  
 ttctatggga aatacacagc tgaaattaaa cagaatttgg aaagaggaa agctgtctaa  
 960  
 tcccttcaag aactgtttat agaagcttga gaatggggta aaaatttctg ctagcaaaat  
 1020  
 caagttcttt ttgaaatttt atcagtaatc cagaatttag tagtccatgc cttctcactc  
 1080  
 agcatttaga aataaaaatg tggtttctta aacgtatatc ctttcatgta tatttccaca  
 1140  
 tttttgtgct tggatataag atgtatttct tgtagtgaag ttgttttgta atctactttg  
 1200  
 tatacattct aattatatta tttttctatg tattttaaat gtatatggct gtttaattct  
 1260  
 tgaagcattt tgggcttaag attgccagca gcacacatca gatgcagtca ttgttgctat  
 1320  
 cagtgtggaa tttgatagag tctagactcg ggccacttgg agttgtgtac tccaaagcta  
 1380  
 aggacagtga tgaggaagat ggcagtggcc accggaggac tggagcagtc cctcctcatg  
 1440  
 gcggcctgtg accaaggctg gggaggagtg gagctatcct tccatgatct gatcatgtac  
 1500  
 ttcggagaga ggctggagtg tgctaccgac gtcgaatate catgcagtcg gttagaggct  
 1560  
 ggagtgtgct accgacgtcg aatatccatg cagactagaa aaccattat ctcagcccaa  
 1620  
 aatctcctta agctgataag caacttcagc aaagtctcag catacaaaat caatgtaca  
 1679

<210> 5614  
 <211> 242  
 <212> PRT  
 <213> Homo sapiens

<400> 5614  
 Ser Gln Phe Ser Leu Ser Gln Val Leu Val Asp Ser Ala Glu Glu Gly  
 1 5 10 15  
 Ser Leu Ala Ala Ala Glu Leu Ala Ala Gln Lys Arg Glu Gln Arg  
 20 25 30  
 Leu Arg Lys Phe Arg Glu Leu His Leu Met Arg Asn Glu Ala Arg Lys  
 35 40 45  
 Leu Asn His Gln Glu Val Val Glu Glu Asp Lys Arg Leu Lys Leu Pro  
 50 55 60  
 Ala Asn Trp Glu Ala Lys Lys Ala Arg Leu Glu Trp Glu Leu Lys Glu  
 65 70 75 80  
 Glu Glu Lys Lys Lys Glu Cys Ala Ala Arg Gly Glu Asp Tyr Glu Lys



agtcagcctt cccggaaaag aagtgtttcc catggatcta accatacgca aaaaccagac  
 840  
 gagcagagaa gtgaaccatc tgcaggcatt cctaaagtaa ccagcagatg cattgattca  
 900  
 aaagaaccaa tagaaaggcc agaggagaaa ccaaaaaagg aaggctttat acgatcttct  
 960  
 gaaggaccaa aacctgaaaa agtatataaa tctaaatcag aaactcgttg gggcccacga  
 1020  
 ccaagctcta acagaaggga agaagttaat gatagacctg tgagaagatc aggtcccat  
 1080  
 aaaaaacctg tacttagaga tatgaaagag gaacgggaac agaggaagga gaaagaagga  
 1140  
 gaaaaggccg aaaaggtcac tgaaaaagta gttgtaaagc ctgaaaagac ggaaaagaag  
 1200  
 gatcttcctc ctccccacc accacctcag ccaccagcac caattcagcc acagtcagtt  
 1260  
 ccaccaccaa ttcaaccaga agcagagaaa tttccttcaa cagaaactgc aactttggct  
 1320  
 caaaaacat ctcaggatc tgagaagcct ctggaacctg tgagtactgt tcaggtagag  
 1380  
 cctgcagtta agactgtaaa ccaacagact atggcagcac cagtagtcaa agaaaaagaa  
 1440  
 ctacaaaaga aagaaagaaa gcaagaaaaa gaaaaagaac tagaacggca gaaagaaaag  
 1500  
 gaaaaagaac tacaaaaaaa aa  
 1522

&lt;210&gt; 5616

&lt;211&gt; 507

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 5616

Pro Ala Val Leu Ser Gly Tyr Phe Lys Gln Phe Gln Lys Ser Leu Pro  
 1 5 10 15  
 Pro Arg Phe Gln Arg Gln Gln Glu Gln Met Lys Gln Gln Gln Trp Gln  
 20 25 30  
 Gln Gln Gln Gln Gln Gly Val Leu Pro Gln Thr Val Pro Ser Gln Pro  
 35 40 45  
 Ser Ser Ser Thr Val Pro Pro Pro Pro His Arg Pro Leu Tyr Gln Pro  
 50 55 60  
 Met Gln Pro His Pro Gln His Leu Ala Ser Met Gly Phe Asp Pro Arg  
 65 70 75 80  
 Trp Leu Met Met Gln Ser Tyr Met Asp Pro Arg Met Met Ser Gly Arg  
 85 90 95  
 Pro Ala Met Asp Ile Pro Pro Ile His Pro Gly Met Ile Pro Pro Lys  
 100 105 110  
 Pro Leu Met Arg Arg Asp Gln Met Glu Gly Ser Pro Asn Ser Ser Glu  
 115 120 125  
 Ser Phe Glu His Ile Ala Arg Ser Ala Arg Asp His Ala Ile Ser Leu  
 130 135 140  
 Ser Glu Pro Arg Met Leu Trp Gly Ser Asp Pro Tyr Pro His Ala Glu  
 145 150 155 160  
 Pro Gln Gln Ala Thr Thr Pro Lys Ala Thr Glu Glu Pro Glu Asp Val

165 170 175  
 Arg Ser Glu Ala Ala Leu Asp Gln Glu Gln Ile Thr Ala Ala Tyr Ser  
 180 185 190  
 Val Glu His Asn Gln Leu Glu Ala His Pro Lys Ala Asp Phe Ile Arg  
 195 200 205  
 Glu Ser Ser Glu Ala Gln Val Gln Lys Phe Leu Ser Arg Ser Val Glu  
 210 215 220  
 Asp Val Arg Pro His His Thr Asp Ala Asn Asn Gln Ser Ala Cys Phe  
 225 230 235 240  
 Glu Ala Pro Asp Gln Lys Thr Leu Ser Thr Pro Gln Glu Glu Arg Ile  
 245 250 255  
 Ser Ala Val Glu Ser Gln Pro Ser Arg Lys Arg Ser Val Ser His Gly  
 260 265 270  
 Ser Asn His Thr Gln Lys Pro Asp Glu Gln Arg Ser Glu Pro Ser Ala  
 275 280 285  
 Gly Ile Pro Lys Val Thr Ser Arg Cys Ile Asp Ser Lys Glu Pro Ile  
 290 295 300  
 Glu Arg Pro Glu Glu Lys Pro Lys Lys Glu Gly Phe Ile Arg Ser Ser  
 305 310 315 320  
 Glu Gly Pro Lys Pro Glu Lys Val Tyr Lys Ser Lys Ser Glu Thr Arg  
 325 330 335  
 Trp Gly Pro Arg Pro Ser Ser Asn Arg Arg Glu Glu Val Asn Asp Arg  
 340 345 350  
 Pro Val Arg Arg Ser Gly Pro Ile Lys Lys Pro Val Leu Arg Asp Met  
 355 360 365  
 Lys Glu Glu Arg Glu Gln Arg Lys Glu Lys Glu Gly Glu Lys Ala Glu  
 370 375 380  
 Lys Val Thr Glu Lys Val Val Lys Pro Glu Lys Thr Glu Lys Lys  
 385 390 395 400  
 Asp Leu Pro Pro Pro Pro Pro Pro Gln Pro Pro Ala Pro Ile Gln  
 405 410 415  
 Pro Gln Ser Val Pro Pro Pro Ile Gln Pro Glu Ala Glu Lys Phe Pro  
 420 425 430  
 Ser Thr Glu Thr Ala Thr Leu Ala Gln Lys Pro Ser Gln Asp Thr Glu  
 435 440 445  
 Lys Pro Leu Glu Pro Val Ser Thr Val Gln Val Glu Pro Ala Val Lys  
 450 455 460  
 Thr Val Asn Gln Gln Thr Met Ala Ala Pro Val Val Lys Glu Lys Glu  
 465 470 475 480  
 Leu Gln Lys Lys Glu Arg Lys Gln Glu Lys Glu Lys Glu Leu Glu Arg  
 485 490 495  
 Gln Lys Glu Lys Glu Lys Glu Leu Gln Lys Lys  
 500 505

&lt;210&gt; 5617

&lt;211&gt; 3480

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 5617

nactcaagct gaatgcttta ttgtaatctc ccaaattcctg tggatagcgc ttaaagatta

60

aataagtttt cgtagggttat actatcattt ttttttctga ctttttagaaa aaaaatgatc

120